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MY MINNESOTA

BY

ANTOINETTE E. FORD

TEACHER OF INDUSTRIAL GEOGRAPHY,
MECHANIC ARTS HIGH SCHOOL, ST. PAUL;
FORMERLY TEACHER
IN FOURTH, FIFTH, AND SIXTH GRADES,
ST. PAUL PUBLIC SCHOOLS

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TO
THE BOYS AND GIRLS OF MINNESOTA

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HAIL, MINNESOTA!

Minnesota, hail to thee!
Hail to thee, our state so dear!
Thy light shall ever be
A beacon bright and clear;
Thy sons and daughters true
Will proclaim thee near and far;
They will guard thy fame
And adore thy name;
Thou shalt be their Northern Star.

Like the stream that bends to sea,
Like the pine that seeks the blue,
Minnesota, still for thee
Thy sons are strong and true.
From thy woods and waters fair,
From thy prairies waving far,
At thy call they throng
With their shout and song,
Hailing thee their Northern Star.



A MINNESOTA FARM

CHAPTER I

THE COMING OF THE WHITE MAN

As you read, find out why Radisson and Groseilliers deserve no credit as explorers.

Let us go back to the time when there was not one human being in the region occupied by our beautiful state of Minnesota, now boasting nearly two and a half million inhabitants. Many changes took place before the land was ready for man. Again and again it lay at the bottom of the great ocean. Once high and grand mountains crossed it. At another time it was shaken by mighty volcanoes and later buried beneath thick fields of ice. In the course of years the land came to look much as it does now; but only the red man was here to enjoy the beautiful rivers and lakes alive with fish, and the forests, abounding in wild animals. This was less than three hundred years ago.

Forty or fifty years after settlements were made in our eastern states, the first white men trod the soil of Minnesota. These were two Frenchmen, Radisson and Groseilliers (pronounced Grō-zā-yā'). Radisson, scarcely twenty years old, was full of courage and longed for wild

adventure. Groseilliers, who had married Radisson's sister, was an older man, well experienced in the dangerous life of the pioneer Indian trader, and of a milder and more prudent disposition. The two men have been compared to a boat. Groseilliers was the ballast to keep the boat steady, while Radisson was the sail which gave the speed. Both knew much of Indian ways and language.

Radisson had come to Canada with his parents in 1651. A few months later he had been captured by the Iroquois Indians, who held him a prisoner for a year.

Leaving Montreal in 1654, these two Frenchmen spent the first winter on the shores of Lake Michigan. In the spring of 1655 they crossed Wisconsin on snowshoes. Radisson tells us that it was a pleasure to walk in the morning, because the snow froze hard enough every night so that they could go without "racketts," as the snowshoes were then called. When the sun began to shine, however, the snow stuck to their snowshoes until they weighed thirty pounds, he judged. With their heavy burdens walking became painful. There were one hundred fifty in the party, of whom one hundred forty-eight were Indians. At last they came to the Mississippi at Prairie du Chien, and here they spent three weeks in making boats in which to go up the river. These boats were probably not birch canoes, for there was not much birch in this vicinity. Most likely they were hollowed out logs.

The voyagers passed through Lake Pepin and up the river to Prairie Island, the first inhabited island in the Mississippi. Prairie Island was so named because it was



MEN ON SNOWSHOES—THEIR SNOWSHOES ARE VERY MUCH LIKE THE
“RACKETTS” USED BY THE EARLY FRENCHMEN IN MINNESOTA

a beautiful prairie without a single tree. It lies between Red Wing and Hastings, about nine miles below the latter city, and is the largest island in all the course of the Mississippi. This island is ten and a half miles long with an average width of two miles. Here a large number of Indians had taken refuge from their enemies and had begun to cultivate corn. The newly worked soil had yielded a small harvest the previous year, but proved very pro-



COURTESY OF MINNESOTA HISTORICAL SOCIETY

MALE AND FEMALE BUFFALOES

ductive the second season. As much food would be needed for the long journey back to Canada, Groseilliers spent the summer on the island or nearby in order to provide a large supply of corn, while Radisson devoted himself to collecting furs. For months he went from river to river with hunting parties. He was delighted with the

fertile country and was filled with wonder at the great herds of buffalo. The native tribes had not yet obtained firearms; game was everywhere abundant.

The next spring the Frenchmen were ready to go back to Montreal. Radisson tells that they had a great store of castor skins, meaning beaver. With plenty of corn, and nets to catch fish, which were numerous in the rivers, they wanted nothing. In order to secure all the fur trade of this part of the country, they had persuaded five hundred Indians to return with them. When it was time to leave, the Indians heard that their enemies were on the war path and so refused to go. Groseilliers and Radisson called a council, to which as many as eight hundred Indians came from all over the state. The two Frenchmen used all their eloquence, begging and threatening the Indians. Finally Radisson pulled a beaver skin from the shoulders of one of the Indians and beat him with it, saying that if they would not come with him, he and Groseilliers would go alone. The brave young Frenchman so impressed the Indians that he gained his point. At last the splendid company was on its way, with fifty canoes and great loads of beaver skins.

The arrival of Groseilliers and Radisson with their valuable stock of furs brought great rejoicing to the French settlements on the St. Lawrence. They were gladly received, for furs had become scarce because the Indians with whom the settlements usually traded had suffered from famine and at the hands of the fierce Iroquois. At Quebec the guns of the fort fired a salute, and



COURTESY OF NORTH AMERICAN BEAVER RANCH, PILLAGER, MINN.

BEAVER ON FEED BED

the three ships lying at anchor here soon received a valuable cargo of furs to take back to France. The governor made gifts to the two travelers and sent them by ship to their home.

In 1658 the new governor of Quebec was so unjust in granting terms for a second expedition that Groseilliers and Radisson departed in the night, taking with them, however, the good wishes of the people and of the garrison. They navigated the entire length of Lake Superior and were the first white men to travel among the Indians of northern Minnesota. Wherever they went they tried to make peace among the hostile tribes and to establish friendship toward France. During the winter of 1660

there was a terrible famine, probably at Knife Lake in Kanabec County. Many Indians perished, and the two Frenchmen barely survived.

In August of that year they arrived at Montreal with three hundred or more Indians and very valuable furs. To punish them for going without his authority, the governor of Canada imposed very heavy fines, which was a harsh treatment to men who had undergone great hardships in opening new regions for the fur trade. Groseilliers went to France to seek justice, but in vain.

Angry and resentful, these two daring and enterprising sons of France turned to England to present their plans for a great business venture. It was due to their efforts that the Hudson's Bay Company was organized.

Some years after his visits to what is now Minnesota, Radisson wrote an account of his travels. This remained unknown for over two hundred years, but in 1885 copies were printed from it. The narrative is written in English and is sometimes hard to understand. Although dates are often uncertain, the main points of the story are quite well established. The writer seems to conceal all geographical facts which would have assisted later explorers. No doubt he was afraid that others would take the profits of his journeys from him. In spite of the daring courage and unquestioned ability of Groseilliers and Radisson, they deserve no credit as explorers, for they left no maps and kept back the knowledge of their discoveries, which would have given them fame throughout the world for all time. Nevertheless, these two Frenchmen stand out in

history as the first white men to see Minnesota, and for that reason are of great interest to us. Their dauntless spirits arouse our admiration.

How did these Frenchmen travel in summer and in winter?

What difficulties did they encounter? Why do you think they divided the work as they did?



CHAPTER II

DULUTH AND FATHER HENNEPIN

These two explorers are considered very fearless, unselfish, and honest. When you read, think of all the points which have gained for them this reputation.

Now we come to two great names in the history of Minnesota, Duluth and Father Hennepin, men who came to this region with high motives. While others wished only to make money in the fur trade, they wished to establish the power of France as well. Duluth was sent out by a company of Canadian merchants, who desired to open trade at the head of Lake Superior and in the country beyond. He was credited as being the first white man in Minnesota, up to the time that Radisson's manuscript was discovered.

One of the first things which Duluth did was to call a council of the warring Indian tribes on the shores of Lake Superior, near where the city of Duluth stands today. As a result the Indians declared a peace with each other and with France. A little later he went up the St. Louis River, made a portage to the Mississippi River, and visited a great Indian village near Mille Lacs. Here on July 2, 1679, he planted the arms of the king and took

possession for France: thus he was the first white man in Minnesota who was not ashamed to report and record the fact.

Retracing his steps, he traveled along the north shore of Lake Superior to the Pigeon River, which now forms part of the boundary between Minnesota and Canada. On this river he established a trading post on a spot which later became of great importance in the business of fur trading.

In 1680, the next year, while on one of his expeditions into the country of the Sioux, Duluth was surprised and angered to learn that the Indians were holding three white men as prisoners, one of whom was a priest. With



MAKING A PORTAGE

a few companions he immediately set out to rescue the captives. After two days and nights of lively paddling in his canoe, he met the Sioux hunters, one thousand or more. With them were Father Hennepin and two Frenchmen. Before telling the story of the meeting, we shall learn of Father Hennepin's previous adventures.

Doubtless you have heard of the French explorer, La Salle, who at this time was pushing the flag of France into the regions south of Minnesota. On his first expedition to the Mississippi Valley, he had been joined by Father Hennepin. While preparing a long voyage of exploration down the Mississippi River to its mouth, he sent out a party of three to explore its headwaters. Among these was Father Hennepin, who hoped to convert many Indians to Christianity. In early boyhood Louis Hennepin had longed to visit America; and great was his joy, when as a young priest, he was transferred from France to the New World. He gained valuable experience by serving as a missionary among the Indians in western New York, and was delighted with the prospects of the task given him by La Salle. Strange to say, he thought that by sailing up some tributary of the Mississippi, he could reach the Pacific Ocean, and then he could easily go to China and Japan. He believed that these countries were probably on the same continent as America. We can see how confused were his ideas of geography.

Early in 1680 Father Hennepin and the two Frenchmen set out in a bark canoe laden with their arms,

personal belongings, and gifts for the Indians. In the packs were tobacco, two pounds of beads, ten knives, twelve awls or bodkins, and a package of needles. The little party went down the Illinois and began their toilsome journey up the Mississippi, against the current.

Near the mouth of the Wisconsin River they met an Indian war party of thirty-three canoes. When the Indians began to shoot arrows, the explorers held out a peacepipe, which La Salle had given them when they left him. On seeing this, the red men stopped shooting and approached. After an anxious night one of the chiefs asked for the peacepipe, and, after filling it with willow bark, smoked it. This meant that the white men were to return with the Indians to their villages and not to be scalped as some had wished. Father Hennepin gave Lake Pepin the name of "Lake of Tears," because here the Indians who wished to kill him and his friends wept all night, to induce the others to consent to their death.

While going up the river, one of the white men shot a wild turkey with his gun, causing great excitement among the Indians. Probably this was the first time these Indians had ever heard firearms.

After nineteen days, the party landed in a bay, believed to have been the mouth of Phalen's Creek at St. Paul; so the first white men to visit the neighborhood of St. Paul and Minneapolis were Father Hennepin and his companions. The Indians broke Father Hennepin's canoe to pieces and hid their own in the weeds. They then set out on foot for their villages on Mille Lacs, by a trail

which followed the divide between the waters of the Mississippi and the St. Croix.

On his arrival Father Hennepin was completely tired out. He was placed on a bear skin before the fire; and to ease his aching limbs, a small boy rubbed them with the fat of the wild cat. This was supposed to be a cure for all lameness on account of the agility of that animal. When the Indians saw how weak he was, they gave him a steam bath. They led him into a small hut, which they soon filled with steam by pouring water on a pile of heated stones. After several such baths Father Hennepin regained his strength.

Although Father Hennepin was adopted by one of the chiefs, he was really a prisoner. The Indians seemed to have been fond of him and to have treated him quite kindly. However, he was made to work the soil and to plant seed. Such labor was humiliating to the Indians and was done only by women, never by braves. His mariner's compass was a constant source of wonder. Father Hennepin had with him an iron pot with feet like a lion. Before any Indian would come near his lodge, this had to be hung in a tree. Father Hennepin tells of making a dictionary of Indian words, which he began in order to know how to ask for food when hungry.

After some weeks Father Hennepin and one of the Frenchmen were allowed to take a canoe to the mouth of the Wisconsin River, where La Salle had promised to send supplies. The other Frenchman joined them later. Going down the Mississippi, they soon reached the Falls of St.



FROM A PAINTING BY DOUGLAS VOLK, IN THE STATE CAPITOL

FATHER HENNEPIN DISCOVERING THE FALLS OF ST. ANTHONY—NOTICE THE PORTAGE COLLAR ON THE SQUAW AT THE RIGHT

Anthony. They were the first white men to enjoy this sight. In a tree nearby Father Hennepin engraved the cross and the arms of France, and named the cataract for his patron saint. His description is quite accurate, but he says that the falls were forty or fifty feet high. This is greatly exaggerated, as they are really under twenty feet in height. As Father Hennepin was passing the falls, he saw an Indian in a tree on the opposite side, weeping bitterly. This man was making an offering to the falls of a beautiful beaver robe trimmed with porcupine quills, and spoke in these words: "Thou who art a spirit, grant that our nation may pass here quietly without accident, may kill buffalo in abundance, conquer our enemies, and bring in slaves some of whom we will put to death before thee. The Messenecqz (Fox Indians) have killed our kindred; grant that we may avenge them."

A few days later Father Hennepin was overtaken by a large band of warriors. These Indians went on with him in the hope of seizing the goods of the Frenchmen whom Father Hennepin expected to meet. Disappointed in finding no one at the mouth of the Wisconsin, they spent some time in hunting the buffalo.

Late in July when Father Hennepin was returning with the Indians to the villages on Mille Lacs, Duluth met him. It is not certain at just what point on the Mississippi the meeting took place. Duluth told the chiefs that Father Hennepin was his brother. He took the priest into his own canoe and told him that he should not allow himself to be held as a prisoner by the Indians

without showing resentment. He impressed upon him that it was striking a blow at France, to suffer such insult.

After reaching Mille Lacs, Duluth caused a council to be held. He spurned the calumets which were offered him, and sternly demanded the reason why the treaty with the French had been broken. The Indians repented their misdeeds, and one of the chiefs sketched a rude map to guide Duluth on his homeward journey. Promising to return to trade with the Indians, Duluth and Father Hennepin departed.

As they passed the Falls of St. Anthony, two of the men stole two buffalo robes which were hung on trees as offerings. When Duluth heard of it, he was very angry and told the men that they had endangered the lives of the whole party. However, the men insisted on keeping the robes, and fortunately the Indians never troubled the white men about them.

From Quebec Father Hennepin returned to France and in 1682 published an interesting book about his discoveries.

Before going to the rescue of Father Hennepin, Duluth had planned making a trip to the west for the purpose of finding the great sea, which the Indians had described to him. He never carried out these plans, although he spent the rest of his life in the service of New France. One of the great events of his life occurred in 1690, when, with two hundred picked voyageurs, he went from Mackinac to Montreal. These voyageurs piloted the

greatest cargo of beaver ever brought from the west in a single year. These furs, valued at an immense price, were carried in a great fleet of boats.

This wonderful leader of men was always a fearless supporter of law and order. He fought the whiskey traffic among the Indians, and he tells in his writings of the misery it caused among them. When he died in 1710, the governor of Canada wrote to the colonial minister at Paris, "Captain Duluth died this winter. He was a very honest man."

Duluth and Father Hennepin should be honored for being the first white men to make known their explorations in Minnesota.

On the map of Minnesota what bears the names of these explorers? Search the map for other French names, for there were several other French explorers of our state.

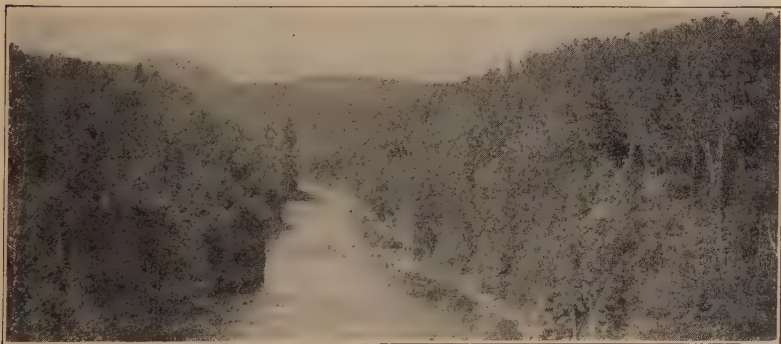


PHOTO BY KENNETH M. WRIGHT

PIGEON RIVER

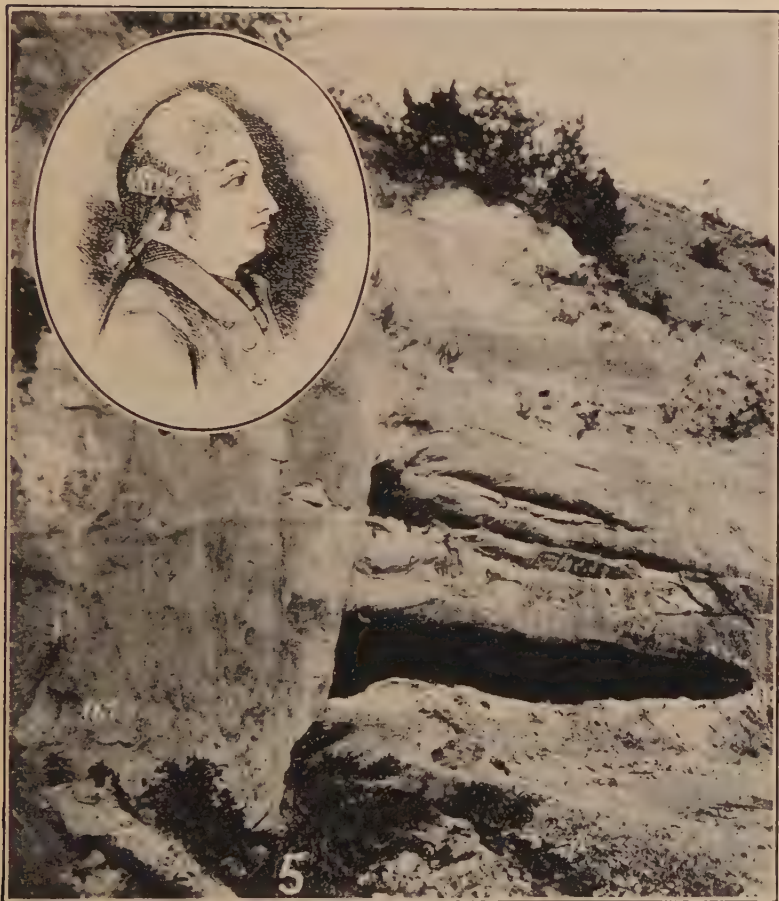
CHAPTER III

JONATHAN CARVER

While reading, observe at what times Minnesota has been either as a whole or in part a French, Spanish, or English colony.

For over one hundred years the whole of the area of Minnesota was part of New France. At the close of the French and Indian War, in 1763, France gave up all her land east of the Mississippi River to Great Britain except the city of New Orleans. The year before France had taken the precaution to transfer to Spain, by means of a secret treaty, all her North American possessions which lay west of the great river and also the city of New Orleans. Since no Spanish explorers and traders ever visited the upper Mississippi and no Spanish settlements were ever made here, it is thought that France did this to prevent England from getting all of the valuable fur country. Later on Napoleon by another secret treaty, took this western region away from Spain.

The British government had no money to spend in exploring its newly acquired lands, and, for a time, seemed to take no interest in developing or protecting trade in the Northwest. In 1766 Captain Jonathan Carver, a native of Connecticut, set out alone for the wilderness.



COURTESY OF MINNESOTA HISTORICAL SOCIETY

CAPTAIN JONATHAN CARVER AND CARVER'S CAVE. THE PICTURE OF
THE CAVE WAS TAKEN JUST ONE HUNDRED YEARS AFTER CARVER'S
VISIT

He had resolved to do more than the French explorers had done. He would cross the Rocky Mountains, then descend to the ocean and stand upon the western shore of the continent, and possibly find a short cut to China. Then he would return with charts of the region through which he had traveled. This was the plan of a daring adventurer, who worked entirely at his own expense but in the hope that England would later repay him for his valuable services.

Captain Carver reached the Mississippi by way of the Great Lakes and the Fox and Wisconsin Rivers. Coming up the river, he reached the Falls of St. Anthony in the middle of November. He estimated the height of the cataract as thirty feet, which of course is too great. Impressed with the beautiful landscape at this point, he said that he believed a more pleasing view could be found nowhere in the world. His sketch of the falls was afterwards engraved.

A little later Carver went up the Minnesota River for about two hundred miles and spent the winter with a band of Sioux Indians. Some historians think that he did not go nearly so far as he claimed. He tells of trying to learn the Sioux language so as to make his stay as comfortable as possible, and boastfully adds that soon he was able to make himself understood perfectly. In the spring he came down to St. Paul with the Indians who were bringing their dead to be buried in the Indian Mounds. They did this every year. Solemn services were held for a dead chieftain, who was evidently no ordinary man.

These services took place in the cave in the white sandstone below the Indian Mounds which Carver had visited on his upward journey. This has since been called Carver's Cave. The Indians called it "The Dwelling of the Great Spirit." This cave served as a storehouse, a fort, and a council chamber for the Sioux Indians. For centuries it had been a place of refuge from storm and cold, and, perhaps, from pursuing enemies. On the walls of the cave were carved pictures of events in the history of the red men. Carver describes the cave as being of remarkable depth. According to his account, about thirty feet from the entrance a lake began and extended so far into the distance that the darkness prevented any attempt at exploring. The bottom was of fine clear sand.

Carver tells how the dead chieftain, dressed in the clothing of his tribe, was propped up in a sitting position on a mat. In his hair were the well-earned eagle feathers, showing the foes he had killed, and on his feet were richly beaded moccasins. Carver's description of the funeral of this Indian brave so interested the great German poet, Schiller, that he wrote a poem on the subject.

When the Indians made their yearly trip to bury their dead, they held a council in Carver's Cave, and for this reason the cave has been jokingly called "Minnesota's First State House." Carver claims to have been adopted by an Indian chief at the council. He also claims to have made a treaty with the Indians, by which he received a deed of land from St. Anthony Falls to Lake Pepin.

For over a century the cave remained unchanged in appearance. One hundred years after Carver's visit, the Minnesota Historical Society held a celebration of the event in the cave. This occurred in May, 1867. One of the party sang a song at the rear of the cave, the echoes from which were remarkable. Much more recently the railroad has dug down the bluff, in which the cave is located, and has nearly destroyed it.

Carver noticed Indian mounds on his way up the river, just before he reached Lake Pepin, and was the first person to call attention to them. He felt sure that they were ancient fortifications. It has now been learned that there are about 12,000 such mounds scattered throughout the state of Minnesota, the highest being in the northern part, not far from International Falls. They were generally built in groups, often as in St. Paul, on the tops of bluffs, not far from a river or lake. The Indians could come in boats, and during their stay, the fish and game from the nearby waters afforded them food. The ancestors of the present Indians are thought to have been the builders of the mounds, nearly all of which were used for burial. One of the finest groups in Minnesota is at St. Paul. Six mounds remain here, although at one time there were many more. Human bones were found in these mounds, but no complete skeleton; pottery, beads, and peacepipes were found also. Those who are interested in Indian relics may see the things which were taken from the mounds in the museum of the State Historical Society in St. Paul.



PHOTO BY KENNETH M. WRIGHT

INDIAN MOUNDS AT ST. PAUL

Not receiving the supplies which he expected, Carver hastened down the river to Prairie du Chien, near the mouth of the Wisconsin River. This place, which is not far from the southeastern boundary of Minnesota, was an important spot in the early days. The fur traders used to meet here before setting out for their distant posts. Here he was again disappointed. Since he had used all the presents he had brought for the Indians, he decided to go way up to Grand Portage on the north shore of Lake Superior in the hope of getting more. After a long, hard trip, he reached this oldest white settlement in Minnesota, only to be told by the traders at the post that they had no goods to spare him. There was nothing for him to do but to return to his home.

The next year Carver sailed for England and made known his explorations to the government. The published accounts of his travels were much read, but only part of his expenses was paid back to him. Due to the Revolutionary War, which was already threatening, his plans to build a fort on Lake Pepin as a base of supplies, and to push his explorations westward to the Pacific, were hardly listened to.

Although he was badly mistaken in his ideas of finding a short cut to China by way of the Minnesota River, in many ways Carver had great foresight. He saw great possibilities of trade from the upper Mississippi to the Gulf of Mexico; he also suggested an open water route by way of the Great Lakes to New York. Of all the explorers of Minnesota, none took greater pride in his achievements than Jonathan Carver.

It is interesting to recall how some of John Smith's party went up the James River to find the Pacific, and Henry Hudson went many miles up the Hudson River before he was convinced that it did not lead to China. What was Carver expecting to find on his trip up the Minnesota River?



VIEW OF MISSISSIPPI RIVER BELOW CARVER'S CAVE AND THE INDIAN
MOUNDS

CHAPTER IV

ZEBULON PIKE

Notice, as you read this chapter, how Minnesota became a true American possession.

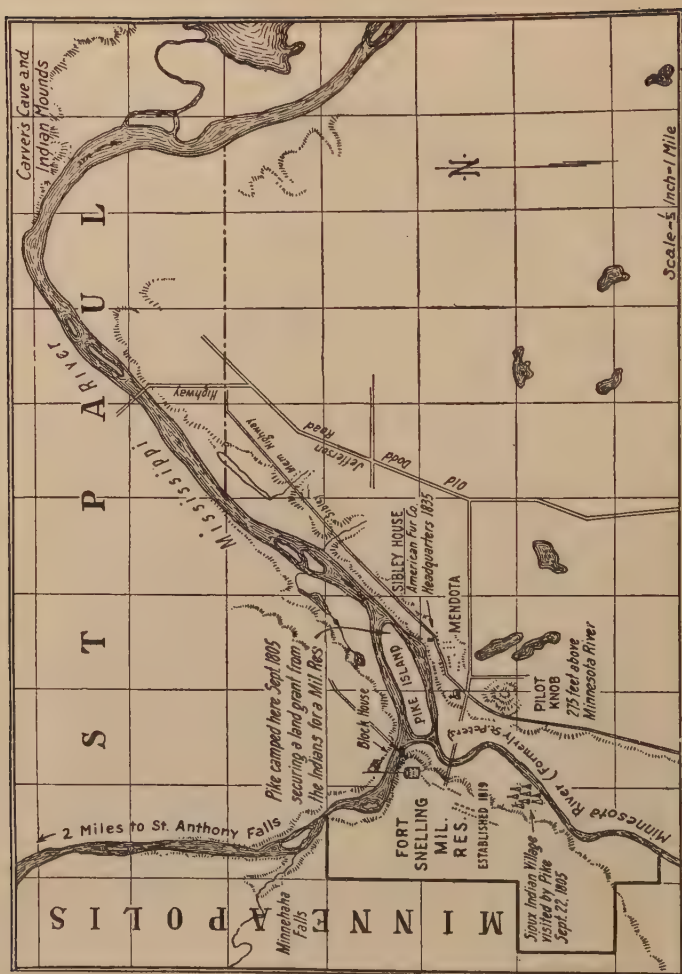
One of the ambitions of Napoleon was to establish another New France in America. In 1801 Spain gave back to France by secret treaty her former possessions lying on the west of the Mississippi. This region was called Louisiana, which, of course, included the greater part of the present state of Minnesota. England, learning of the schemes of the French, made ready an attack in order to prevent their fulfilment. Rather than permit Louisiana to fall into the hands of the English, Napoleon was willing to sell the whole province to the United States at a very cheap price. This was done in the year of 1803. To control the whole course of the Mississippi, including its mouth on the Gulf of Mexico, was a great advantage to our country.

Two years later, Lieutenant Zebulon Pike was appointed by President Jefferson to find the source of the Mississippi. You have heard of Lieutenant Pike in connection with Pike's Peak in Colorado, which he discovered after his trip to Minnesota. He was a native



COURTESY OF GREAT NORTHERN RY.

ZEBULON PIKE



COURTESY OF GREAT NORTHERN RY.

of New Jersey, and was then twenty-six years of age, having entered the service when he was only fifteen. He was five feet eight inches tall, with blue eyes and light hair. Very temperate in his habits, and always faithful in doing his duty, he was in every way fitted for the task set him. With twenty men and a stock of provisions for four months, he started up the river from his encampment near St. Louis, in August, 1805, in a keel boat seventy feet long.

Although twenty years after the Revolution, Pike found English trading posts still along the Mississippi. He was to secure a site for a fort in order to strengthen the hold of the United States on this frontier. On September twenty-first the United States flag appeared for the first time in Minnesota. It was unfurled on an island where Pike camped at the mouth of the Minnesota River, then called St. Peter's River. This spot is now named Pike Island and is just below the bluff on which Fort Snelling was built some years later. The whole region was a wilderness, and Pike tells of seeing three bears swimming across the river, adding that they were too far off to kill them.

Pike visited a Sioux village near the present location of St. Paul, but found it deserted. The Indians who lived there had gone to gather wild rice; when they heard of Pike's arrival, they returned, eager to see the white man. Late the next day a party of one hundred and fifty warriors led by Little Crow reached the island where Pike had encamped. This chief was the



PHOTO BY KENNETH M. WRIGHT

PIKE ISLAND FROM AN AIRPLANE—HERE THE MINNESOTA RIVER (AT THE RIGHT) JOINS THE MISSISSIPPI RIVER. FORT SNELLING IS IN THE LEFT HAND LOWER CORNER

grandfather of the Little Crow of whom we shall hear later.

At noon of the following day Pike held a council in a bower made of sails from his boat. He had arranged these on the beach so as to furnish shade. Pike made a speech in which he told the Indians that they should live at peace with the other tribes. He said that it was the intention of the United States to establish military posts and public trading factories, where the Indians could get goods cheaper than from the traders. He

asked for two tracts of land on which to establish these posts. After the council he gave the Indians presents, and then an agreement was signed granting to the United States land extending nine miles on each side of the Mississippi, including the Falls of St. Anthony, and another tract, nine miles square, at the mouth of the St. Croix River. The Indians did not wish to sign the grant, thinking that their word of honor should be taken without any mark; but Pike convinced them that it was not on their account but on his own, that he wished them to sign. In his speech Pike let the Indians know that their Great Father no longer lived beyond the great salt water. He addressed the red men in a friendly way as brothers and told the chiefs he expected them to give orders to all their young warriors to respect the American flag.

Pike spent five days at the Falls of St. Anthony, making a map and measuring the falls, which he found to be sixteen and a half feet in height. When the expedition started out, it was expected that the work would be finished before winter set in. Pike soon realized that this would be impossible, but on no account would he go back defeated. He pushed up the river, and amid great hardships performed all sorts of duties in addition to those of a commanding officer.

By the middle of October snow had fallen; the men, working the canoes against the current, were benumbed with the cold. Selecting a suitable spot on the Mississippi, he built two blockhouses strong enough to withstand

attack, where he left much of his baggage and provisions, and part of his men. Then the brave leader continued on foot, using bob-sleds to carry the supplies needed. The prairie was bare in spots, and it was extremely difficult to pull the sleds; often only four or five miles were covered in a day. Food was scarce as game was hard to get.

One day in December the sled carrying Pike's baggage and ammunition fell into the river. All were in the icy water up to their waists recovering the things. Much of the ammunition was destroyed, but some of the powder was saved; otherwise the trip would have ended right there. In January another misfortune befell the explorers. One night Pike's tent caught on fire. His leggings, moccasins, and socks were lost; but, for a wonder, three small casks of powder did not take fire. They continued on their way north; once in a while they came to a trading post, where they were given a good meal. Pike tells of the excellent roasted beaver and boiled moose's head. At Sandy Lake the sleds were replaced by toboggans.

By February first, marching in advance of his men, Pike reached the western edge of Leech Lake, and at the post of the Northwest Company was cheered with a "good dish of coffee, biscuit, butter, and cheese for supper." During a previous cold snap frozen fingers, noses, and toes were not uncommon; and poor Pike was obliged to rest his swollen feet for a while. Before long, however, he made an excursion on snowshoes to Cass

Lake, then known as Upper Red Cedar Lake. He was told that this was the "upper source of the Mississippi," and he felt that he had accomplished his purpose of finding the main source of the great river. The large southern arm of Cass Lake now bears the name of Pike Bay.

At Leech Lake he commanded the British director of the Northwest Company in the region not only to haul down the British flag at all his posts, but to give no British flags to the Indians. Hoisting the American flag, he directed the Indians and his own riflemen to shoot down the British flag found flying at the top of a tall staff at the post. Pike demanded that the British stop smuggling goods into the country. On account of this smuggling, he estimated that the American government was losing large sums of money every year. The English trader politely promised to do all that was asked.

While at Leech Lake, Pike held a council with the Indians. He had brought the pipe of the great Sioux chief, Wabasha, and this was solemnly smoked in the council. The Indians generally gave up their British flags good-naturedly, but the day after the council Pike, thinking that he would impress them with the power of the Great Father at Washington, paraded his army of eleven men, and put them through a drill in which blank cartridges were fired. This reminds one of Captain Miles Standish, who with an equally small army, had awed the savages in a similar manner nearly two hundred years before in the old town of Plymouth, Massachusetts.

Pike started home in style with a cariole and dog team, a present from the representative of the British fur trading company. The return trip was not without its hardships. When the Falls of St. Anthony were reached on April tenth, ice was floating in the river and the falls were "much more tremendous" than in the preceding autumn. Pike tells how different his feelings were from what they had been at that time, for now he had successfully accomplished his purpose. Without the loss of one man, after an absence of nearly nine months, the party finally reached St. Louis.

Pike's accounts of his expedition had slight effect upon the officials at Washington, and almost no effect upon the public. His journal was not published until 1810, and by that time the War of 1812 was so near, that there was no interest in the remote Minnesota wilderness. During this war Pike, who had advanced to the rank of brigadier-general, lost his life while gallantly leading his army.

No doubt the British flag soon appeared again over the trading posts of Minnesota, and British goods were again smuggled in, but Pike had won the respect and admiration of the savages, who had been entirely under English influence, and who had known almost nothing of the American government. Some historians tell us that there is little doubt that, but for Pike's visit, the Indians of this region would have taken a far more active part in helping the British in the War of 1812.

In Pike's long travels what states did he probably cross?

CHAPTER V

FORT SNELLING IN THE EARLY DAYS

As you read, you will find out how the government wisely prevented attacks by the Indians.

Fort Snelling, at the junction of the Minnesota and Mississippi Rivers, played a leading part in the early history of our state; it marks the first permanent occupation of Minnesota. From the time of its founding up to the establishment of the territory thirty years later, the fort was the chief point of interest on the Mississippi above Prairie du Chien. Most important of all, the garrison here safeguarded peace and order over an immense area.

After the close of the War of 1812 the English still kept up their trade with the Indians in American territory. There was nobody on the ground to see that the terms of the treaty made at the end of the war were carried out. The American Fur Company complained to the government that the British traders were constantly bringing goods into the country without paying duty; thus the need of establishing a fort on the upper Mississippi was shown. In 1816 Congress passed a law forbidding anyone except American citizens to carry on trade with the Indians in United States territory. When

the Northwest Company composed of English traders was compelled to leave, it sold out its posts to the American Fur Company, which had been organized a few years before by a young German named John Jacob Astor.



COURTESY OF MINNESOTA HISTORICAL SOCIETY

ROUND TOWER AT FORT SNELLING

Monroe was president, and Calhoun was Secretary of War at that time. In 1819 Calhoun sent Colonel Henry Leavenworth up the river to establish a fort and to see that the law against the British traders was enforced. Pike had bargained with the Sioux Indians for land with the building of a fort in view, but for fourteen years the

government had not taken possession nor made the promised payment.

In the same year Congress appropriated two thousand dollars for the payment of the lands ceded to Pike. This amount was spent in goods such as blankets, tobacco, guns, and gunpowder. The payment was happily managed by Major Forsyth, the special Indian agent for this region; on this account the red men did not feel that the whites were trespassing on their land.

Colonel Leavenworth's party made quite a spectacle as the seventeen boats came up the river, and the Indians were deeply impressed by their first sight of the United States army. They called the soldiers "long knives" on account of their swords. Besides the barge for the colonel there was Major Forsyth's keel-boat laden with goods for the Indian payment, also two large boats loaded with provisions and military stores, in addition to fourteen bateaux managed by twenty hired boatmen. There were ninety-eight troops in the company.

Major Forsyth landed not far from Lake Pepin and visited the Indians. He told them that a fort was to be built at the mouth of St. Peter's (Minnesota) River, and that they must not think that anything bad was intended. Then he went on to tell them how the fort would help them as a place of trade, and also as a place where any little thing they wished repaired would be attended to by a blacksmith. Besides this their enemies would not be allowed to injure them at, or near, the fort. He told them (the Sioux) also that they must not injure any of

their enemies (the Chippewas) that might visit the post. He further told them that their Great Father, the President, meant to do only what was good, and that Colonel Leavenworth, whom he pointed out, was chief of the soldiers belonging to the Great Father. The Great Father, he said, was at peace with all the world, yet he was prepared for war; also that he had many soldiers, and at one blow from his whistle he could get as many more soldiers as he wished. After assuring the Sioux that the Great Father did not wish war and would not be the first to begin, but would not lie still and allow his young men to be killed without avenging them, the



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OLD BLOCKHOUSE AT FORT SNELLING. THE RIVER IN THE PICTURE
IS THE MINNESOTA

Major closed by distributing gifts to the chieftains. At almost every landing place bands of Indians begged for presents.

The troops arrived at Mendota on the twenty-fourth of August and were at once set to work cutting down trees and making roads up the river bank. Soon they were building log houses near the present town of Mendota. Colonel Leavenworth called his first establishment New Hope. The quarters were all log cabins, and the building of them was full of hardship and difficulty. The logs were cut in the surrounding forests, and, as there were no teams to haul them, they often had to be carried a considerable distance by the men. Stone had to be quarried for chimneys and fireplaces, wells had to be dug, and a hospital had to be built. All of which meant hard labor. In September reinforcements to the number of one hundred twenty men arrived.

The following winter scurvy raged among the troops, and forty died of the disease. The cause of the trouble was found to be pork, which had been sent in barrels from St. Louis. Dishonest contractors had drawn the brine from the barrels on leaving that city, in order to lighten the load; before delivering the pork, they had filled the barrels with river water. Thus to gain a few dollars and to save a little labor, many lives were wickedly and needlessly sacrificed.

The officers and their wives lived in the boats until the rude huts were completed. After living in the open boats, the log cabins plastered with clay seemed a luxury,

for winter had already set in. It was December before all were housed. Though the first winter was extremely cold, the garrison remained cheerful and even had dancing parties every two weeks.

The land on the Mendota side was too low to escape the spring floods. High water from the melting snow and from rains spread over the bottomland at New Hope so that a more sanitary location was chosen for a camp of tents through the summer. This was on the upland prairie nearly a mile northwest of the place selected for building the fort. On the slope of the bluff below were beautiful clear springs, so this new location was named Camp Coldwater. During three winters and summers, from 1819 to 1822, when the construction of the fort had so far advanced that it was occupied by the garrison, New Hope and Coldwater alternated as quarters for the post. The former, being in a wooded valley, was sheltered from the bleak winter winds, and the other was more suitable for summer.

In the summer of 1820 Colonel Leavenworth was transferred to service in the Southwest where he established various military posts on the frontier. Leavenworth, Kansas, founded by him, still bears his name. The command passed to Colonel Josiah Snelling, who held it for seven years. This commander had won fame by a gallant charge against the Indians, in the night battle of Tippecanoe.

Colonel Snelling at once decided that the fort should be built on the high point of land between the Mississippi

and the Minnesota, which Pike had selected as a good place for it. On September 10, 1820, the cornerstone of the fort was laid. A tree was standing on the extreme point with the name of Pike carved on it by his own hand. Strict orders were given to spare this tree. Although it was carefully guarded, one morning it was found cut down. There was much lamenting, but it was never known who had done the deed.

The fort was built of wood from logs cut on the Rum River. In 1822 a rude sawmill, the first in Minnesota, was completed at St. Anthony Falls. Here logs were sawed into lumber. The officers from the fort superintended the building of the mill, and it was guarded by a few soldiers. A portion of the lumber, however, was cut out by whip-saws before the sawmill was finished. The fort was named Fort St. Anthony by Colonel Snelling. Not until October, 1822, was the first building, used for officers' quarters, ready for use. As rapidly as quarters could be prepared, the troops occupied them, but it was 1824 before all were quartered here.

After a short time four stone towers were built for defense at the corners of the fort. The wooden buildings were all used as barracks. The whole fort was in a diamond shape to suit the shape of the ground at this point. After several years a strong stone wall, nine feet high, was built all around the post. This had loopholes for use in case of siege. All the stone used came from the limestone quarries right at hand. Altogether the post

was very strongly fortified, and the bluffs on two sides were an added protection.

Because of its location Fort Snelling is one of the most commanding fortifications of the country, and it is little wonder that it was never attacked. In early days it formed the extreme frontier of the Northwest, with nothing but wild animals and wild savages within hundreds of miles in any direction. The Round Tower and the hexagonal tower or block house, on the side of the bluff, still remain to remind one of old Fort Snelling. The Round Tower is wonderfully preserved. On it are two bronze tablets, one in honor of the explorer, Pike, and the other in honor of the first commander of the fort, Colonel Leavenworth. By looking into the loopholes in this tower, one can see the great thickness of its massive walls.

A few days after the arrival of Colonel and Mrs. Snelling a baby daughter was born to them at Camp Coldwater. This was the first child born of white parents in Minnesota. After a short life of thirteen months she died. For many years a weather-beaten monument marked the grave of the little one in the military graveyard at Fort Snelling. Mrs. Snelling visited the fort more than twenty years afterward and found the little grave still well cared for. The original stone on which the little girl's initials were roughly chiseled has been used in a memorial to Minnesota's first white child, in the new chapel at Fort Snelling.

During the first summer at Fort Snelling gardens were

planted, and plenty of potatoes and fresh vegetables were raised for all. The Indian agent who resided at the fort during the first few years, deserves credit for establishing the first farm school in Minnesota, for he organized a government farm near the post and attempted to teach the Indian boys agriculture.

In 1823 Colonel Snelling experimented in raising wheat and applied to the government for the machinery necessary for a small gristmill. His request was granted, and a pair of burr millstones and the other equipment needed were ordered from St. Louis, which was a great outfitting point even in those days. The foundation of the lumber mill at St. Anthony Falls was extended, and a second building was erected where wheat and corn were ground. The first flour ground was so poor that the soldiers refused to eat the bread made of it. The wheat had become mouldy or had sprouted, so the wretched black bread tasted bitter. The troops were so angry, when it was issued to them, that they brought it to the parade ground and threw it down there. Colonel Snelling came out and remonstrated with them. For more than three months during the following winter, provisions were so scarce that the garrison was placed on half rations.

Less serious than the shortage of food was the lack of other articles. During the second winter the quartermaster was compelled to make out his accounts to send to Washington on pieces of birch bark, as he had no paper.

On the tenth of May in the year of 1823 great excitement was caused at the fort by the arrival of the Virginia,

the first steamboat to ascend the river to this point. As the boat approached, the Indians stood in speechless crowds on the shore, placing their hands over their mouths. This was their usual way of expressing astonishment. As the huge monster advanced against the current, they thought it some enormous water god, puffing out its hot breath and spouting water in every direction. A salute was fired from the fort. When the boat began to blow off steam, it was like the unbottling of an earthquake. Squaws forgot their children and with streaming hair ran for safety. Even the stoutest braves, contrary to their usual stoical habits, shook with terror and scampered away like frightened deer. In a twinkling every redskin had vanished into the woods, screaming and shouting. The Indians claimed that they had dreamed the night before of seeing some monster of the deep, which had frightened them very much. The savages called the steamboat a "fire-canoe."

Among the passengers on the Virginia was Count Beltrami, an Italian exile, of whom we shall hear later. The boat brought many supplies to the fort. It was one hundred eighteen feet in length, twenty-two feet in width, and drew six feet of water. Built at Pittsburgh, or at some city near there, it was commanded by Captain Crawford. Wood, which was frequently cut from the forests by the crew, was the only fuel. During the voyage up the river a forest fire raged for almost one entire night. The flames fanned by the wind towered above the hills. The sight was terrible, yet beautiful.

Before long steamboats came more or less regularly to the fort. The mail was brought by a special messenger from Prairie du Chien, but for years, during the winter time, there was only one mail in five months. On board the Virginia, on its first trip, were several ladies, the wives and sisters of the men at the post. They formed a most welcome addition to the little circle there. At one time a play was presented at the fort; and there were so few women, that some of the men had to sacrifice their long beards in order to take the female parts.

In 1824 General Winfield Scott inspected Fort Snelling. During the week at the fort he visited St. Anthony Falls and made a fishing excursion to the lakes nearby. General Scott was very pleased with what Colonel Snelling had done and recommended to the War Department that the name of the fort be changed in honor of the commanding officer. The department complied with General Scott's request, and the name of Fort St. Anthony was changed to that of Fort Snelling. In his report General Scott spoke favorably of how the land around the fort was cultivated by the soldiers and praised Colonel Snelling for thus keeping his men out of idleness. Cattle and horses had been brought here, but no sheep, probably owing to the severe winters.

Guests at the fort enjoyed visiting the beauty spots nearby. Fishing trips were made to Lake Calhoun, named by the officers in honor of the Secretary of War, and to Lake Harriet, named for Mrs. Leavenworth. They journeyed to St. Anthony Falls, often referred to as Big



MINNEHAHA FALLS—THIS PICTURE WAS TAKEN IN THE EARLY DAYS

Falls, and to Minnehaha, which was Little Falls. The Indians called all waterfalls "haha," from their word which means "laughing." A man named Joseph Brown had assisted in tracing Minnehaha Creek from the falls to its source in Lake Minnetonka, and undoubtedly for this reason, Minnehaha was spoken of as Brown's Falls.

Many happy hours were spent by the children of the fort picking strawberries near Lake Calhoun, or playing in the old mill at the Falls of St. Anthony, but Minnehaha

Falls was the favorite picnic ground in those early days. It was first planned to place the sawmill, which furnished lumber for the building of Fort Snelling, on Minnehaha Falls, but because the creek was very low at the time, it was built at St. Anthony Falls instead. As late as 1842 a visitor at Minnehaha tells of finding deer and game of all kinds. These falls are about forty feet high. Below them the creek flows through a deep glen for half a mile to the Mississippi. It is said that the description of Minnesota scenes given by an early writer (Gail Hamilton), who visited here, awoke in thousands the desire to see the place for themselves. She called Minnesota "fair land of lake and prairie, of pleasant wood and rolling water." Of Minnehaha, she wrote,—“Minnehaha, the very fairy of waterfalls, a dainty, delicate little maid, dancing over rocks with exquisite, winsome grace. ‘Perfect’ is the word that rises to your lips. The gem has no flaw.” No other falls have ever been so celebrated in song and story.

Not until 1855 did Longfellow, then a professor at Harvard College, write *Hiawatha*. He had never been to Minnesota, but had seen an old picture of the Falls of Minnehaha. This led him to read several volumes written by Schoolcraft on Minnesota and the Indians. Schoolcraft, one of the early explorers of Minnesota, had married the granddaughter of a Chippewa chieftain, and was a great student of Indian character. *Hiawatha* was widely read, and immediately a demand for pictures of Minnehaha Falls arose. In a way the poem was a won-

derful advertisement for this part of the country. A magazine article published in Philadelphia in 1855, regrets the lack of tourists at Niagara. It goes on to say that this lack is caused by the desire of Easterners for thrills, this desire drawing them to St. Paul in order to see Minnehaha Falls.

At the present time a life-sized bronze statue of Minnehaha and Hiawatha stands on a small island in Minnehaha Creek, a short distance above the falls. This statue was the gift of the school children of Minnesota. Hiawatha is carrying Minnehaha in his arms, illustrating these lines from Longfellow's poem:

Over wide and rushing rivers
In his arms he bore the maiden.

The names of many distinguished persons are linked with Fort Snelling. Among the first visitors was General Cass, who had been exploring the upper Mississippi and stopped at the fort on his way back in July, 1820. He reported finding a very busy scene, for besides building the fort, ninety acres of ground were under cultivation. He was more than pleased with the delicious green corn, peas, beans, and other fresh vegetables which were presented to him from the post garden. Continuing down the river a short distance, General Cass called on Little Crow, who said that he was glad the general had not passed by without stopping, as many others had done.

General Zachary Taylor was commander at Fort Snelling in 1828 and 1829, and a few years later estab-

lished a regular mail route to the post. Long afterward, while Taylor was president, Minnesota became a territory, and it was he who appointed our first governor.

A name often heard in history is that of Dred Scott. He was the slave of Doctor Emerson, the surgeon of the fort, and lived at Fort Snelling for two years. Doctor Emerson was transferred to Missouri, and after his death Dred Scott sued for his freedom. He claimed that his residence at Fort Snelling had made him a free man, since the soil on which the fort was located had been made free territory by the Missouri Compromise in 1820. For nine years he sued in state and federal courts until Chief Justice Taney of the Supreme Court declared that Scott was still a slave and not a citizen; therefore he had no legal rights and could not seek justice in our courts.

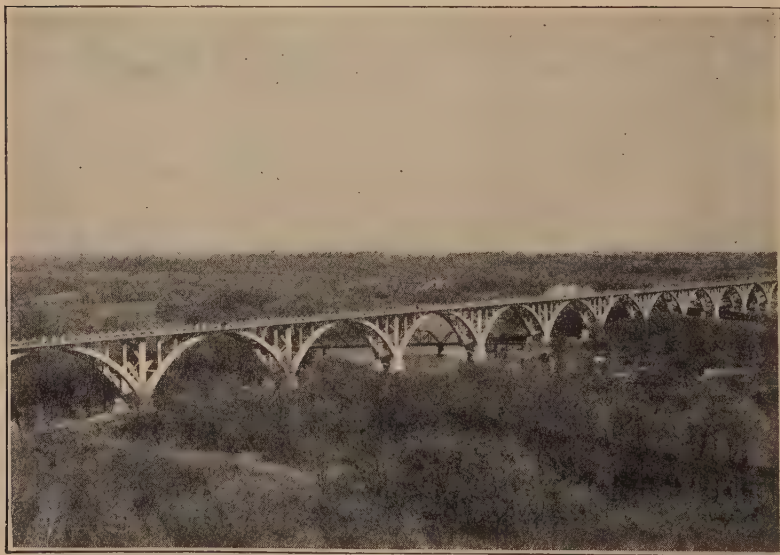
This was the famous Dred Scott Decision, denounced everywhere in the North. We are glad to know that the master, into whose hands Scott passed some years later, freed him and his family. This humble colored man, it is said, did more to overthrow American slavery than the "march of armies or the eloquence of senates." Remember his name in connection with Minnesota history.

Among the most celebrated visitors at the fort were General Grant and General Sherman, but they came in quite modern times, not during the early days.

From this long story one can see what an important place Fort Snelling was in the pioneer days. Is it any wonder that it is always regarded by old settlers as a friend, and that their hearts are sad when rumors are

spread about that the old fort is to be done away with, and the historic spot sold? When you boys and girls are men and women and have a voice in the affairs of this great state, never allow this misfortune to happen, but do your best to preserve Minnesota's most precious landmark.

The history of Fort Snelling is tied up with many names of nation-wide fame. List as many as you can, telling if possible some particular service which each performed. For example: Zebulon Pike served in the War of 1812, Zachary Taylor served as President of the United States.



CONCRETE ARCH BRIDGE LEADING ACROSS THE MINNESOTA RIVER
FROM FORT SNELLING TO MENDOTA. THIS BRIDGE IS NEARLY ONE
MILE LONG

CHAPTER VI

THE SEARCH FOR THE SOURCE OF THE MISSISSIPPI

In reading this chapter, find out how an Indian chief proved himself a good guide, and how a beautiful name was made to order for one of Minnesota's lakes.

From very early times explorers were filled with a great desire to find the source of the Mississippi. Shortly after the purchase of Louisiana from France, by the advice of President Jefferson, Congress appropriated money to pay for an expedition to accomplish this purpose. The President felt that the location of the source would be important in settling the boundary between the United States and Canada. We have already heard how Lieutenant Pike, the leader of this expedition, was confident that he had succeeded in the task set him when he reached Upper Red Cedar Lake. Probably because others did not feel equally confident, a number of expeditions were made to reach the true source of the "Father of Waters."

When the territory of Michigan was extended to the Mississippi River, its governor, Lewis Cass, was naturally curious to know about the vast region to the west which had come under his care. From the Secretary of War

he obtained permission to conduct an expedition, which came to Minnesota by way of the Great Lakes in the summer of 1820. For the first time the flag of the United States was seen on Lake Superior. The birch bark canoes of the party ascended the St. Louis River and by portage reached the Mississippi. Upper Red Cedar Lake was visited by Cass fifteen years after Pike had been there. The season was so dry that it was impossible to take the heavy canoes farther up the stream. Not only this, but the Indians assured the leader that this was the source of the Mississippi. Governor Cass accepted their word for it and started home by going down the river, stopping at Fort Snelling on his way.

In this party was a young man by the name of Henry R. Schoolcraft, who had been hired by Cass to make maps and to be on the lookout for valuable minerals. On his map of the upper Mississippi he changed the name of Upper Red Cedar Lake to Cass Lake in honor of the governor. Now Schoolcraft had his doubts as to whether this lake really was the beginning of the Mississippi, but he did not wish to dispute the point with his leader.

Schoolcraft was ambitious to return to this region and to make further search for the true source of the river but could not do so at his own expense. While acting as Indian agent among the tribes in the Great Lakes district, the opportunity came to him. Governor Cass, who was then Secretary of War, was still a good friend of his. From him he received orders to visit the Indians near the source of the Mississippi, in the hope of making peace

among them. He was also to look after the Indian trade and to vaccinate as many Indians as possible against smallpox.

The season was very wet, and as a result the mud was very troublesome, and the mosquitoes were almost unbearable. Schoolcraft came by the same route which Cass had taken. One portage of nine miles took the party three days, and another of six miles took two days. Farther on they passed through cranberry marshes where they found some of the last year's berries, which they thought were good. They reached Cass Lake in July, 1832. We read that near the lake they saw fine cornfields which had been cultivated by Indian squaws. When we also read that water froze on the bottom of their canoe on the night of July 19, we wonder how this could be.

Yellow Head, an intelligent Chippewa chief, acted as guide for Schoolcraft. Not only did this Indian draw a map of the route to be followed, but he also collected several small canoes, each of which carried three men. Since these canoes drew only a few inches of water, the party was able to continue up the stream. One morning a landing had been made to prepare breakfast when the campfire over which the kettle was boiling spread into the grass and leaves. The men had to work quickly to prevent the baggage from burning. Again and again at sudden bends in the stream the explorers frightened great numbers of ducks. Some of these they shot.

On reaching the summit of a hill at the end of a six-mile portage, they looked down upon Elk Lake cradled

among hills. At last Schoolcraft felt sure that he had reached the source of the Mississippi. This was on July 13, 1832. The form of this lake is very irregular, and the Indians had given this name because the shape was like the branching horns of the elk. Schoolcraft wished to have a more suitable name and so asked a missionary in the party for the Latin for "true head." The missionary could only remember that the Latin word for truth was *veritas* and for head, *caput*. He wrote these two words on a slip of paper, and Schoolcraft by cutting off the beginning of one word and the end of the other, made the word, *Itasca*. Many think this a beautiful Indian name.

On the shore delicious wild strawberries were picked. Deer stood in the waters of the lake not far from the men, and the waterfowl were slow to fly away at their approach. Pitch was heated, and the seams of the bark canoes were mended. Then the party crossed Lake Itasca to an island which still bears Schoolcraft's name. Landing here Schoolcraft directed that a spruce tree be cut down and prepared as a flag staff. This was erected on the island, and the American flag was soon flying from it. Since Schoolcraft had agreed to meet some Indians at the mouth of the Crow Wing River on July twenty-fourth, he hurried away without stopping to explore the shores of the lake.

There is no doubt that Schoolcraft was the first scientific explorer of the headwaters of the Mississippi. If justice be done, however, it is more than probable that



PHOTO BY KENNETH M. WRIGHT

LAKE ITASCA

the honor of discovering the true source of the Mississippi is due William Morrison, an old fur trader. Morrison claims to have made his discovery in 1804, while Pike's expedition to the supposed source of the Mississippi was in February, 1806. For many years the discoverer made no written record of his claims. In 1856 the Minnesota Historical Society published a letter written by William Morrison to his brother. In this letter he claims to be the first white man to have discovered the source of the Mississippi. He tells how he followed up the Mississippi from Red Cedar Lake, now called Cass Lake, to Lake Itasca, then known as Elk Lake. This was in 1804.

Morrison asserts that he found no traces of any white man having been there before him. He goes on to say that he did not see Pike when he came to Cass Lake in his search for the source of the Mississippi because he was at an outpost that winter. The letter also mentions the five small streams that empty into Itasca. These are described as being short and losing themselves in swamps. At the close of his letter, he declares that no white man can claim to have discovered the source of the Mississippi before he did.

In 1836 one of the five small streams mentioned by Morrison as flowing into Lake Itasca, was traced by the French scientist, Joseph Nicollet, who later made the first really scientific map of Minnesota. He followed this stream for some miles. At last he found numerous springs oozing from the base of the hills. These waters soon united, forming a small lake. From this lake, Nicollet

says that he found "the infant Mississippi flowing with a breadth of a foot and a half and a depth of one foot." According to his account this stream, since known as "Nicollet's Infant Mississippi River," passed through two other small lakes before reaching Itasca.

As late as 1888 the Minnesota Historical Society sent out an explorer to examine the region above Itasca Lake. His careful reports, which differ considerably from those of Nicollet, have been published. Visitors to the park sometimes seek out this region of springs and bogs and mosquitoes; however, the little stream flowing out of the north end of Itasca is generally accepted as the first definite appearance of the great river. The total length of Lake Itasca is three miles. It is one of the thousands of glacial lakes in Minnesota. One visitor has said that the lake is the shape of a wishbone, with its two arms pointing south and one pointing north.

In 1891 the Itasca State Park was created. It takes in fifty square miles of the land around the lake. In this way the forests which were being cut down have been saved, and the region at the source of the Mississippi has been made into a playground for the people.

Let us give ourselves the pleasure of traveling through the park. Coming to the crest of a hill from which Schoolcraft first saw Lake Itasca, we read a sign which gives us this interesting information. The land slopes steeply from this point to the lake shore. Immense Norway pines with white pines among them cover the hillside. From the log cabins perched on the summit of the hill,

one can see the blue waters of the lake through the trees. It is truly a beautiful view.

We wander down to the lake shore and take a launch. At the end of this arm of the lake is a wooded point which we are told is Yellow Head Point, named for Schoolcraft's trusty Indian guide. Turning into the north arm, we soon reach Schoolcraft Island where we land. Trees, vines, and shrubs cover the little island densely, and the beautiful high-bush cranberries brighten the green. A post has been erected here, which gives the date of Schoolcraft's visit.

Continuing up the lake to the extreme end of the north arm, we come to the headwaters of the Mississippi. The



COURTESY OF D. LANGE

MISSISSIPPI RIVER AS IT LEAVES LAKE ITASCA

river is about twenty feet wide when it comes out of the lake, a small stream, but at high water deep enough for a canoe or rowboat. Here is a bridge on which we may read the following inscription:

MISSISSIPPI RIVER

Here the Mighty Mississippi Begins to Flow
on its Way to the Gulf of Mexico
2546.52 miles.

We gaze into the clear water, and as our eyes trace this small beginning stream, our minds go far beyond. We picture the many miles of this world-famous river, which has played a leading part in the development of our country. It is a sight long to be remembered.

On the north arm of the lake is located the summer home of the College of Forestry, which is a portion of the State University. Students come here every year to study the trees, of which there is a great variety. Here also is a nursery, where trees are carefully raised and experiments conducted by the United States Forest Service. Besides the stately pines and the fragrant balsam, we see spruces in great number, also tamaracks. Many other kinds of trees grow here, and we notice oaks, maples, birches, and aspens.

If we hunt for them, we may find rare wild flowers, among them the lovely blue fringed gentian. On the lake shore in the spring our beautiful state flower, the moccasin, blooms undisturbed. We read notices posted on the trees that no moccasin flowers are to be picked.

We are glad that the state gives them this protection, for they need it as much as do the wild creatures which roam safely about.

Deer are abundant, and porcupines and beavers are numerous. The beavers have built dams across the Mississippi. These dams show untiring, patient labor on the part of these little animals. When we look at their work, we realize the meaning of the expression "as busy as a beaver." Piles of aspen logs, the bark of which forms the beaver's favorite food, may be seen, as well as the beavers' houses. The houses are built above the dams and on this account the water is always kept deep enough to afford a swimming space under the ice in winter.

In the spring of 1901 the province of Ontario, Canada, sent the governor of Minnesota a present of five beavers. On the way the two male beavers got to fighting, and one



COURTESY OF TEN THOUSAND LAKES OF MINNESOTA ASSOCIATION

A BEAVER HOUSE

of them was killed. One of the females also died on the trip, but the other three animals were set free on Schoolcraft Island. They began to explore the lake at once and by fall had built a house on the west arm of Lake Itasca. It is thought that from this small beginning have come most of the beavers now found in this region. There are so many beavers that some of them are trapped every year. In the office of the superintendent of the park we see some handsome beaver skins.

We may be fortunate enough to see some unusual birds in the park. On the west arm of the lake is a large, strongly built eagle's nest, firmly set in a great Norway pine. In the spring months the scream of the eagle is often heard, as the great bird circles high above the nest. Suddenly he drops to the nest where the little eagles are stretching their mouths wide for food.

The many trails through the park invite us to play the part of explorers ourselves. We follow a trail to the north end of the lake where we find a large oaken post. On this we read that the lost village of the Mound Builders was found here, and that many copper and stone weapons have been taken from the spot. The post also marks the warpath of the Sioux and Ojibways or Chippewas in the seventeenth century. The mounds which we see were made by the Sioux before they were driven out by the war-like Chippewas. As we wander through the forest, the good old scout, Morrison, and the scholarly Schoolcraft come to mind, as well as others who never succeeded in reaching the longed-for goal.

What might Morrison have done at Itasca which would have proved that he was the discoverer of the source of the Mississippi? How many ways can you think of in which Itasca State Park gives pleasure to the different people who visit it?



COURTESY OF D. LANGE

THREE YOUNG EAGLES IN A NEST

CHAPTER VII

FUR TRADING AND HENRY HASTINGS SIBLEY

Read to find out about the first industry of Minnesota and to learn who was "the first gentleman of Minnesota," whose home has been preserved for the future through the kindly advice of a prominent citizen.

Our many lakes, great forests, and long cold winters make Minnesota an ideal place for fur bearing animals. For nearly two hundred years after the explorations of Radisson and Groseilliers furs were the leading product of this region. It is said that there were once forty different kinds of furs found in Minnesota. In the seventeenth century the fashion of wearing furs spread among the wealthy people of Europe, and every stylish gentleman had his beaver hat. A law was passed in England forbidding hat makers to use any other material than beaver fur.

The early French explorers saw a great field for the fur trade in Minnesota, and the first white people to come here to live were fur traders. No trace of the trading posts, which were scattered all over the state, can now be seen; but now and then a name remains to remind us of the past, such as Duluth. This city was named for the great French explorer, who was sent out

by a company of Canadian merchants wishing to establish trade near the head of Lake Superior.

Although all of this region where the furs were obtained was wild and unsettled except for Indians, no one was allowed to collect furs without a license from the king of France. However, the adventures and the profits were so attractive that many young men engaged in the business without the royal permission. The French called these men *coureurs de bois*, which means "rangers of the woods."

Frenchmen first controlled the trade; but later the British, and finally the Americans carried it on. You remember how shabbily Radisson and Groseilliers were treated by France, and how they went to England and helped to form the Hudson's Bay Company. Later this company became very powerful, and at one time handled all the fur trade of the continent. Just about at the close of the Revolution, a strong rival to the Hudson's Bay Company appeared. It was the Northwest Company, which had its headquarters at Montreal. For years this company controlled all the fur trade in Minnesota and to the west. It was not until 1809, when the American Fur Company with John Jacob Astor at its head was organized, that the Americans entered the field.

Fort Snelling, Mendota, and St. Paul are commonly called the early settlements and trade centers of Minnesota, but long before these were even thought of, daring men were carrying on an active trade on our northeastern frontier. Look at the map of Minnesota and at the ex-

treme northeastern point; near where the Pigeon River flows into Lake Superior, you will find the name of Grand Portage. Here a portage nine miles long led from Lake Superior to a place on the Pigeon River above the numerous falls, which occur in the last twenty miles of its course. At Pigeon Falls the river dashes down seventy feet over the rocks. A brisk trade flourished at this place as early as the year 1776 when our country was just declaring her independence of England. We have heard that Jonathan Carver visited the Grand Portage in 1767, in the hope of buying presents to distribute among the Indians.

However, the greatest years in the history of the Grand Portage were later when the Northwest Company took control of this post in 1783. This was the greatest fur trading center that ever existed in Minnesota. This company had a fort situated on a small crescent shaped bay guarded by an island, which made a quiet harbor. There was a canoe yard, where every year seventy canoes were built for the fur trade. The fur trader's canoes were much larger than canoes which one sees now, often being forty feet long and five feet wide and large enough to carry several men and their necessary goods. Canoes made regular trips from Grand Portage into the wilds of Canada, as far north as Great Slave Lake.

At times one thousand men connected with the fur trade assembled here to receive their new outfits for the coming winter. During the long, lonely months spent in collecting furs, the trader looked forward to his annual

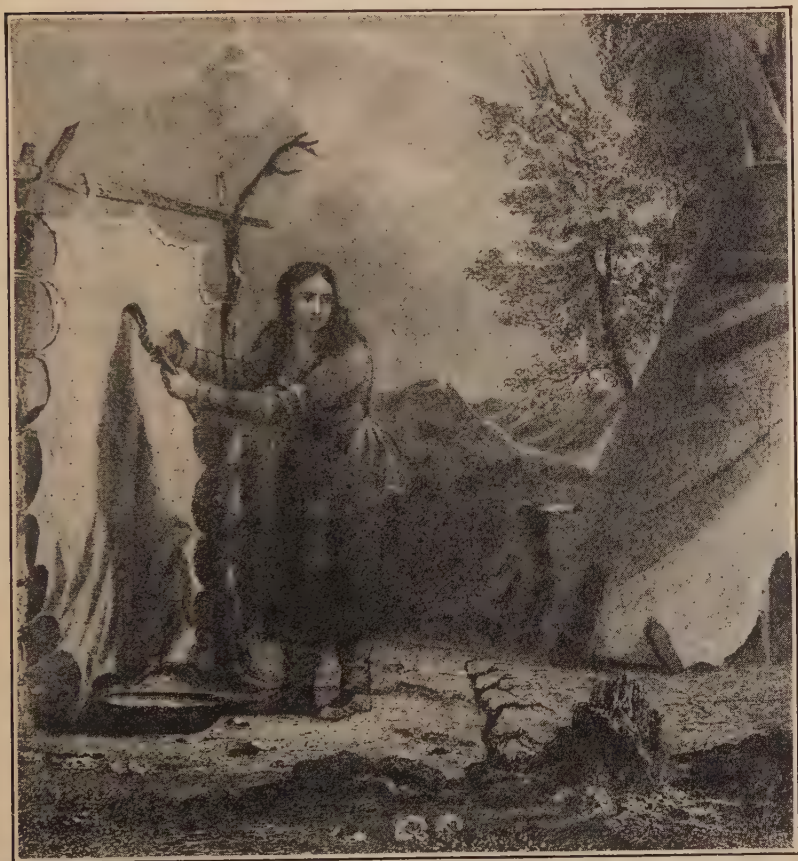
visit at the Grand Portage with its merry times. The evenings were spent in dancing and singing in the great hall of the fort. In the daytime the traders could spend their yearly wages in the shops. The company kept over seven hundred Indian women to scrape and clean the skins and to make up the packages of furs. Altogether the place had the air of a busy city.

Sometimes it was very hard for the men to carry their goods across the portage, for in places the trail was often knee-deep in mud and clay and of course very slippery. The packs of supplies or furs weighed ninety pounds each, and one man carried two or more. A portage collar supported these packs. This was a strong strap, which crossed a man's forehead and hung down his back.

Some years later the old trail was improved so that ox carts could go on it. In fact the first road in Minnesota, built about the year 1800, led from the Grand Portage to Fort William in Canadian territory, a distance of thirty-six miles. It was built of cedar logs over the swampy land, and some of the old logs may still be seen.

The Northwest Company established trade between Fort William and the Columbia River. Imagine the difficulties encountered in pulling the canoes over the mountain passes. Nevertheless trips were made regularly, and valuable furs were brought back in exchange for the goods sent.

For many years after the Revolution the English kept right on trading furs with the Indians on American soil. You remember how Pike, in 1806, ordered that the British



COURTESY OF MINNESOTA HISTORICAL SOCIETY

INDIAN WOMAN DRESSING A BUFFALO SKIN

flags should be hauled down from the trading posts. Even after the War of 1812 the English were making a great deal of money by their unlawful fur trade in American territory. It was due to the complaints of the American Fur Company against the British traders, that Fort Snelling was finally established to protect American interests.

In 1816 when the United States forcibly forbade the English companies to trade any longer with the Indians who lived south of the Canadian boundary, John Jacob Astor of the American Fur Company bought all the posts of the Northwest Company, which lay in this region. The Grand Portage, however, had lost its greatness before this time; the trade had been transferred to Fort William. Today, Grand Portage is nothing but a sleepy little village of Indians and fishermen.

Minnesota can well be proud of the many strong men who helped to lay her foundations, but among these one man stands out above all the others. This is Henry Hastings Sibley. When he first came to this region, Minnesota was a wilderness; and at the end of his long life it had become a state with a population of almost one and a half million. Coming to Mendota in November, 1834, as partner and chief factor of the American Fur Company, he stood for what was best in the fur trade. As this trade was by far the most important of the white man's interests in this part of the country, and as Sibley was its leading spirit, his influence was great. Even the

officers of Fort Snelling were not held in so great respect by the Indians, as was Mr. Sibley.

Sibley was born in Detroit, Michigan. His father was Judge Solomon Sibley, who played an important part in the early history of that state. During the War of 1812 when Detroit was attacked by the British, Mrs. Sibley is said to have made cartridges for the soldiers while holding her youngest child, Henry Hastings. Amid struggles and hardships of pioneer life this mother found time to implant the highest principles in the minds of her children. As Judge Sibley wished his son to become a lawyer, young Sibley began the study of law, but soon gave it up for a more adventurous life. He said himself that his love of field sports induced him to come to Minnesota.

Although Sibley was only twenty-three years of age when he came to Mendota, he had already had five years' experience in the fur business. The last three hundred miles of his trip were made on horseback, and in this distance he passed only one house. While crossing the Mississippi in a wooden canoe, the clumsy over-



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SOCIETY

HENRY HASTINGS SIBLEY

loaded boat was capsized by a wild horse swimming at the side; the future governor narrowly escaped with his life.

At that time there was hardly more than a handful of whites in Minnesota. These were traders and others in the employ of the fur companies, and a few soldiers at Fort Snelling. The little village of Mendota is called the oldest place in our state. One historian says that here was the first collection of white people in Minnesota, aside from the garrison of Fort Snelling. Inhabited by French half-breeds and their Indian wives and children, at times its numbers were increased by traders from outlying posts coming into headquarters to bring their furs and to obtain supplies. As early as 1779 traders were at Mendota, but there is no absolute certainty as to who made the first house. The fur trader, Faribault, had been hired by Colonel Leavenworth to drive the cows and horses intended for Fort Snelling, from Prairie du Chien to the new fort. He decided to settle near the post, where he would be protected from the Indians. After living for a while on Pike Island and on the low land near, he moved to Mendota to be safe from floods. Some historians claim that Faribault's home was the first log house built in Mendota.

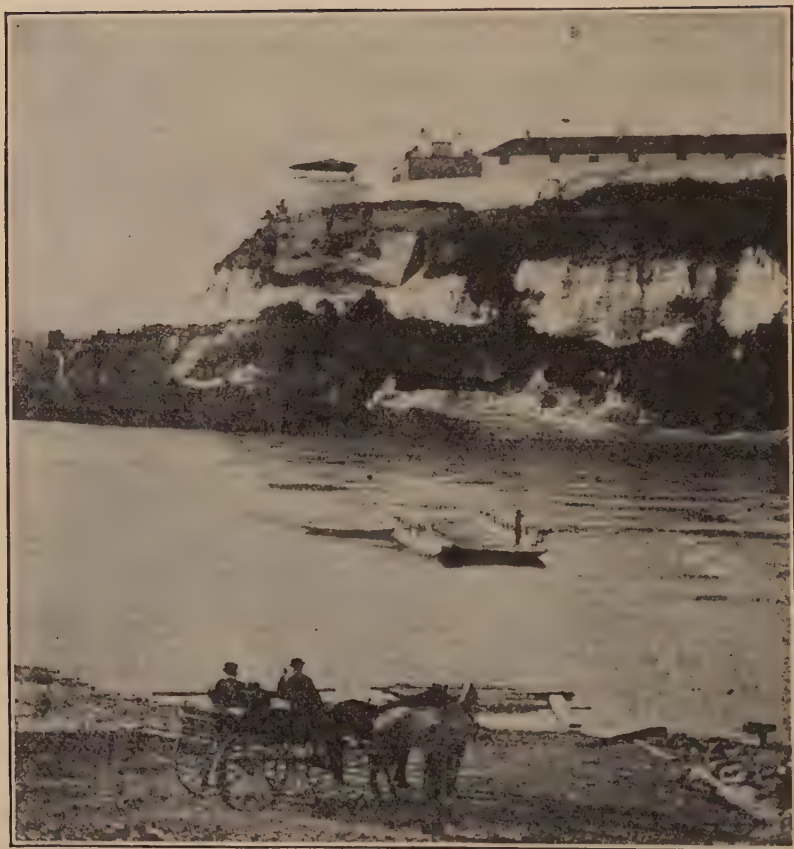
This settlement just opposite to Fort Snelling was called St. Peter's until about 1837 when the name of Mendota was substituted. This is a Sioux word meaning the "meeting of waters." The American Fur Company selected Mendota as the best location for their main

depot of trade with the Sioux. The approach by two rivers, the Mississippi and the Minnesota or St. Peter's, made this a convenient meeting place. During the busy season, large numbers of traders, clerks, voyageurs, and Indians gathered here.

The district over which Sibley was given control as a partner in the American Fur Company extended from Lake Pepin northward to the Canadian boundary and west to Pembina in the Red River Valley. When Mr. Sibley came to Mendota, there were a few log houses there occupied by persons in the fur trade. In 1835 and the following year Mr. Sibley constructed two stone buildings, one a large warehouse and the other a private residence. This was the first stone residence ever erected in all Minnesota and Dakota.

For several years a store built by Mr. Sibley was the only place for miles around where tea, flour, pork, and other necessary articles could be bought. In early days a ferry was established from Fort Snelling to Mendota. Although not the founder, Mr. Sibley was later the owner of this historic old ferry, which has carried many a famous person across the river. In place of this ferry we now have the longest concrete arch bridge in the world spanning the Minnesota River.

Mr. Sibley became intimately acquainted with the Indians and the trappers. It is said that he could speak the Sioux language and French as well as he could speak English. On his tours of inspection to outlying fur posts he often lived with the Indians for months at a time, and



COURTESY OF MINNESOTA HISTORICAL SOCIETY

OLD FERRY AT FORT SNELLING—FOR MANY YEARS THIS FERRY WAS
THE ONLY MEANS OF CROSSING THE MINNESOTA RIVER
FROM MENDOTA TO FORT SNELLING

in this way he became better known among them and among the trappers than any other white man in these parts. The Indians were pleased with his dignified manners and admired his skill as a hunter. Fleet and tireless on foot the Sioux named him "Wah-ze-o-man-nee," which means "walker in the pines." Other names given him by the Indians were "The Tall Pine" or "The Tall Trader."

In Mr. Sibley's division were three hundred traders, who reported to him and received their goods from him. The furs were packed and shipped down the river, generally to Prairie du Chien, and on to Mackinac. Some of these furs were sold here, but others went on to New York or to London. Buyers from all over Europe purchased Minnesota furs, and it is said that some of them even went to China.

The quantity of furs received at Mendota was enormous. In the year of 1835 eighteen kinds of furs were received. Among these were over one thousand buffalo robes and over two thousand minks, about the same number of coons, as well as over two hundred thousand muskrats. All the business was done by barter. No money was used by the traders, and all accounts were kept in beaver skins. A gun could be bought for twenty skins, a blanket for ten, a pound of powder for two, and a pound of shot for one. All sorts of ornaments, clothes, and tobacco were also traded. The Indians were glad to give four muskrat skins, valued at eighty cents, for little mirrors, which cost four cents. Although the gain

on such things as guns and blankets was not nearly so much in proportion, all profits were very great. Records show that goods costing two thousand dollars were traded for furs valued at thirty-five thousand. The yearly stock of furs of Mr. Sibley's division often reached the value of \$300,000.

In 1838 Mr. Sibley was appointed justice of the peace over a territory which included parts of Iowa, the Dakotas, and Minnesota—a region as large as France.

When Sibley was elected as delegate to Congress in 1848, the Congressmen at Washington eagerly awaited his arrival, expecting to see a rough frontiersman dressed in buckskin, with beaded belt and moccasins. Imagine their surprise when the cultured new member appeared dressed in the latest fashion, as dignified and polished as any of them. Fully six feet in height, very erect and athletic, with black hair, and keen brown eyes, “the first gentleman of Minnesota” made a pleasing impression on all who saw him.

On the last day of the session Mr. Sibley succeeded in putting through the House the bill which made Minnesota a territory. He served two terms as representative to Congress from this new territory; and when Minnesota became a state, he was the first governor.

As a result of his military services in putting down the Indian uprising of 1862, he was made a brigadier-general by President Lincoln.

On the fiftieth anniversary of Mr. Sibley's arrival in Mendota the citizens of St. Paul gave a banquet in his

honor. In all those fifty years he had been a prominent figure in Minnesota history.

In 1888 Princeton College conferred upon General Sibley the honorary degree of Doctor of Laws, on account of his attainments as a scholar and his long and varied public service.

Sibley County and the city of Hastings were named for General Sibley, and in St. Paul, Sibley Street and the Sibley School bear his name. He declined the honor of having the city of Hastings named Sibley, but consented to have his middle name used.

General Sibley died in St. Paul on February 18, 1891, lacking only two days of being eighty years old.

The Sibley house in Mendota is still standing. General Sibley occupied it until 1862, when it was sold to St. Peter's Catholic parish and used as a school. Afterward the house was used in various ways, and at last became so dilapidated that it seemed as if it would go to ruin. This misfortune, however, was averted. The St. Paul Chapter of the Daughters of the American Revolution asked that the house be deeded to them, to be restored and made into a museum. Following the kindly advice of Archbishop Ireland, the Mendota parish granted this request, and now the house is open to the public.

Let us visit this interesting place, which has well been called the "Mount Vernon of Minnesota." The stone used in building the house is like that of which Fort Snelling was built. It is limestone from quarries near at

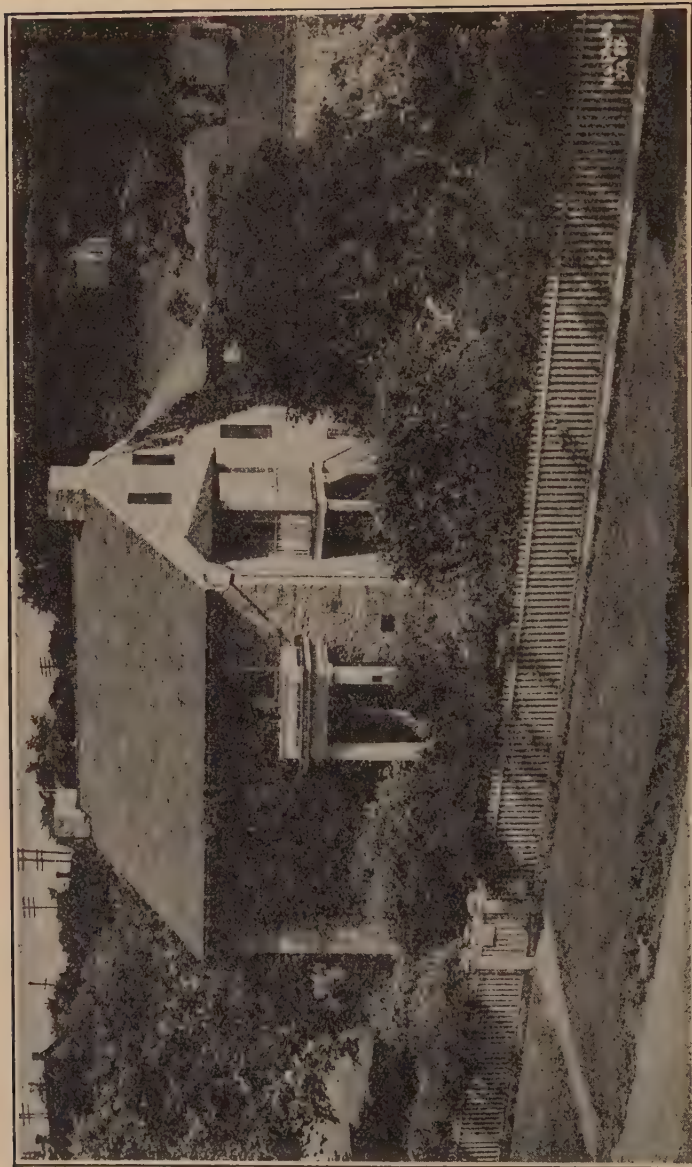


PHOTO BY KENNETH M. WRIGHT

SIBLEY HOUSE AT MENDOTA. NOTICE THE OUTSIDE STAIRWAY WHICH WAS MUCH USED BY THE INDIANS

hand. The heavy walls, two feet thick, made the house warm and comfortable. The builders were Indians and a few Frenchmen. The huge timbers, which were used for beams, window sills, and other purposes, were hewed out by hand and joined together by large wooden pegs. In restoring the house parts of the wall have been left exposed, so that visitors may see how it was made. Through a glass one sees grass and rushes from the river bank twisted into rope to take the place of laths in holding the plaster together. The plaster itself was mud and clay mixed with twigs. We wonder how the walls could ever have been made so smooth and firm.

The front room was at first used as Mr. Sibley's library and office. Here he carried on the business of the American Fur Company, and in one corner stood the first safe ever built in the Northwest. After his marriage this room was used as a parlor, and a room with a large fireplace was built for an office. The first piano ever brought to this region stood at one end of the parlor.

In the dining room we picture the long table filled with distinguished guests, for the Sibleys were generous with their hospitality. Perhaps you would like to imagine yourself a guest of those early days. Our host helps us to the juicy meat, which seems like the finest roast beef we have ever tasted. We are surprised to hear that it is not roast beef at all but the hump from the back of the young male buffalo. Maybe we, too, would mistake the delicious dried beaver's tail for dried beef, just as those other guests once did.

The boys in our party enjoy seeing Mr. Sibley's guns. He was the finest shot in all the country round, and no Indian could excel him in the use of the rifle. The junction of the two rivers, close by, was a favorite place for ducks. For three years Mr. Sibley kept account of the number he killed, and it was just two short of eighteen hundred.

We linger for a moment over the General's epaulets. Here also is the original key to the house, at least six inches long.

Down in the cellar were stored provisions for the entire winter. The steep stairs lead down from the kitchen; many an Indian has used them. In the cellar we see a fireplace with a large crane, where the hungry Indians have often cooked a dinner for themselves. The great hooks, once hung with venison and other game, are empty now.

We pass up the stairs to the bedrooms on the second floor, or we may play that we are Indian guests and use the stairway on the outside of the house, which brings us to a door at the foot of the attic stairs. Up to the attic, we mount. Here sometimes thirty braves have stretched themselves on the floor to sleep, safe from cold and storm. We see a real Indian canoe and many other reminders of Indian life. And here is a portrait of that good Indian, John Other Day, who saved the lives of many white people during the dreadful Sioux Massacre.

In the yard the old ice house, once in ruins, has been

restored. The well is still there, although the bucket has been replaced by a pump. A grand old oak tree, near the house could tell us many an interesting tale.

General Sibley used to delight to tell how he had lived in four territories and one state while residing at his home in Mendota. This historic old mansion has been located in Michigan, Wisconsin, Iowa, Minnesota territory, and the state of Minnesota, without once moving from its solid foundations. May it long remain to remind us of its founder, Henry Hastings Sibley, whose service to the state was without measure.

Sibley, who was the last of the great fur traders, was truly a man of noble character. He reminds us of Duluth, one of Minnesota's first great fur traders. Both were fearless leaders who won the respect of the Indians and all others with whom they had dealings. These two men are the outstanding figures in the history of fur trading, the first industry of our state.

Why was the junction of two rivers a most desirable location for a fur trading post? Why is the "Mount Vernon of Minnesota" an appropriate name for the Sibley house? How has it come about that the Sibley house is now furnished about as it was when General Sibley lived there in the fifties?

CHAPTER VIII

EARLY DAYS IN ST. PAUL AND THE RED RIVER CARTS

Read to learn how the capital of our state received its name; how a clumsy method of transportation which was used in various parts of the world for nearly two thousand years helped in the development of Minnesota.

During the early years at Fort Snelling many settlers from the Selkirk Colony in the Red River Valley made their homes in the neighborhood of the fort. These people had been brought over from Europe by the Earl of Selkirk. His intentions were kind; but if his colonists had been unfortunate in Europe, they suffered still greater hardships in the pioneer life to which they came. Persecuted by Indians, their crops destroyed by grasshoppers, frosts, and flood, a considerable number left and came down to Fort Snelling. The military post afforded them protection, and Colonel Snelling allowed them to settle near the fort. Here they built homes and started to farm. There was rich pasture land for the cattle which they brought with them. These settlers, who were mostly French Canadians and Swiss, spoke French. As a whole they were thrifty and hard working people.

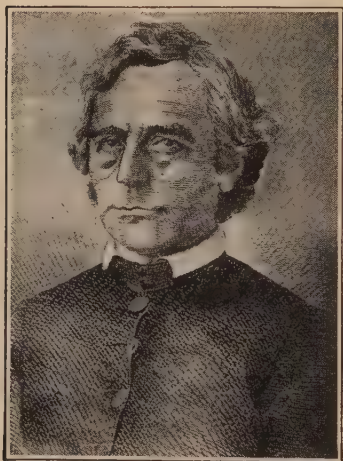
All went well for some years, but after the Indian treaty of 1837 the land near the fort was reserved for

government use. The new commanding officer complained that the settlers were using so much wood that the garrison would suffer a shortage of fuel before many years. He also complained that the cattle belonging to the settlers strayed into the fort and were a nuisance. These squatters, as people are called who settle on land not belonging to them, were ordered off by the War Department. Moving across the river, they built homes, but were still on the military reservation. Here their number was increased by others, who proved themselves very undesirable by selling liquor, making trouble with the soldiers and Indians. Having refused to leave their homes, all were finally driven away and their houses destroyed. This was in 1840.

The unlucky squatters moved farther down the river, and some of them settled on ground which now forms the heart of the present city of St. Paul. Pierre Parrant, a French Canadian, had come in advance of the others. In 1838 he staked out the first claim on the site of the capital city and opened a little trading station, which dealt mostly in liquor. Parrant had but one eye and went by the name of Pig's Eye, so one can imagine something of his looks. The little settlement which gradually grew up under the edge of the bluff was composed mostly of French Canadians. For some time it had no name. Among those who staked out claims were Abraham Perry, Benjamin and Pierre Gervais, Joseph Rondo, Vetel Guerin, and Edward Phalen.

In the year 1840 Father Lucian Galtier, a Catholic

priest who had made a study of the Sioux language, was sent to the neighborhood of St. Paul to minister. Archbishop Ireland has said of him, "If any one man can be said to have been the founder of this city in the begin-



COURTESY OF MINNESOTA HISTORICAL
SOCIETY

REV. LUCIAN GALTIER

nings of which there were many more or less concerned, the honor of the title is to be awarded to him." The next year a small piece of land, enough for a church, a garden, and small graveyard, was given to Father Galtier by Benjamin Gervais and Vetel Guerin. On this land, which now lies in the business district of the city, a log chapel was built. Eight men, who volunteered for work, helped to clear the ground and to build a chapel. It was placed

in a grove of oak trees and was made of the rough oak logs which were cut on the spot. These were fastened with wooden pins.

A mill owner in Stillwater contributed some bark covered slabs, which were brought up the river by steamboat and hauled up the hill from the river by hand. In the construction of the roof, floor, and benches, these slabs were put to good use; while the rafters were tamarack poles, cut from a swamp in the rear. The chapel occupied



COURTESY OF MINNESOTA HISTORICAL SOCIETY

ST. PAUL'S CHAPEL—FROM PAINTING BY ALEXIS FOURNIER

a commanding position on top of a high bluff overlooking the Mississippi, a short distance below the point where the Wabasha Street Bridge now crosses the river. It had only two windows, one on each side. Over the door was placed a little cross. The rude structure was twenty-five feet long by eighteen feet wide and ten feet high. It took only a few days to build it, and the cost was very little.

On the first of November, 1841, the chapel was solemnly dedicated to "Saint Paul, the Apostle of Nations." It was this little missionary chapel that grouped together the early settlers on the east bank of the Mississippi, and thus became the center of the future city.

About this time Reverend Augustin Ravoux arrived in St. Paul, and three years later he succeeded Father Galtier, spending his long life in St. Paul or its vicinity. The chapel was enlarged in 1847, and during the following winter a bell was installed in a little belfry beside it. The bell came from the steamer Argo, which had been sunk in the river. Presented by Henry Rice, it was the first mounted bell dedicated to the use of any church or school in Minnesota.

After the little chapel had been used for a number of years, a new church was built, and the Sisters of Saint Joseph took the old log chapel for their school. They stuffed up the holes between logs to keep out the cold. It also served for a hospital at one time. With the intention of rebuilding it of the same materials, on the grounds of St. Joseph's Academy, this chapel was later

taken down. However, the men working there did not know the history of the logs nor how they were to be used, and burned them to warm themselves or maybe to warm up their coffee; so this interesting relic of early days was lost.

For a long time the settlement had no name. For want of a better, some one called it Pig's Eye, which was so offensive to Father Galtier that he begged that the place be given the same name as his little chapel. When the postoffice was started at Jackson's store in 1846, the steamboats began to land on the east side of the river, and the straggling village was called St. Paul's Landing, then St. Paul's, and finally just St. Paul. The disgusting name of Pig's Eye was transferred to a spot farther down the river and is now seldom heard. The citizens of St. Paul owe a debt of gratitude to Father Galtier for his efforts in establishing the name of their city.

At the museum in the Minnesota Historical Building in St. Paul one may see the rough wooden box, with less than twenty pigeon holes, which once held the mail for all the families of St. Paul. Navigation was not to be relied on after the first week of November, and the first steamboat in the spring arrived about the tenth of April. During five months communication between this part of the country and the rest of the world was full of difficulties and far from frequent. The mail was brought from Prairie du Chien on the ice, sometimes by a dog train. When the news at last reached St. Paul, it was so old that the more favored people down the river had forgotten

it. When the ice began to melt in the spring, communication was impossible, and for several weeks the inhabitants of St. Paul were completely shut off from the world.

A number of steamboats would collect on the river south of Lake Pepin, waiting for the ice to break up in the lake. The captain of each boat was eager to be first to arrive at St. Paul, and so to win the prize of free dockage. One spring a captain entered a wide crack in the ice, taking a chance that this was the beginning of the breaking up of the ice. Slowly the crack closed, but the passengers were all able to walk ashore, and the crew was able to remove the cargo before the boat, crushed to pieces, sank in the icy waters.

In 1845 a small school was started in St. Paul, but it lasted such a very short time that it is hardly worth mentioning. Two years later a school was started in St. Paul, which some historians call the first in Minnesota, outside of those connected with the Indian missions. The schoolhouse was made of logs, chinked with mud and covered with bark. It had formerly served as a blacksmith's shop. On three sides pegs were driven into the logs, on which boards were laid for seats. In one corner was a hen's nest. Since there was no bookstore within three hundred miles, the teacher, Miss Harriet Bishop, had been directed to bring with her from her home in the East enough books to begin school. There were more Indian than white children among the pupils. Unfortunately the little Indians, most of whom attended school

wrapped in their blankets, were not very eager to learn.

For years after the settlement of St. Paul its inhabitants were of necessity merely squatters upon the land. All of Minnesota except the Fort Snelling reservation was Indian territory, and the government did not sell land or grant titles, until given this right by treaties with the red men. In 1848 the land now occupied by St. Paul was put up for sale. The settlers, who were certainly entitled to become the lawful owners, feared that speculators might deprive them of their homes by bidding a higher price. They sought the aid of H. H. Sibley, the chief trader of the region and the big man in whom they trusted absolutely. Mr. Sibley promised to bid in the land for them. When the time came, he found himself surrounded by a number of the men for whom he had agreed to act, each one armed with a heavy club. It was quite easy to see what would have happened to any unfriendly speculator, who had dared to outbid Mr. Sibley. Some of these men refused to accept the deeds to their property, believing they were safer in Mr. Sibley's hands than in their own.

For many years fur trading was the chief industry in St. Paul. Most of the furs were brought by the Red River or Pembina carts, which, as one historian says, may be called the first freight cars in Minnesota. The first Red River cart came to Mendota in 1844, but in the summer of 1847 over one hundred carts made the trip to St. Paul.

These carts were made entirely of wood fastened with

buffalo hide and wooden pegs, and they had only two wheels. At first the wheels were cut from a single round of a tree, although later on, spokes were used. The wheels were five and a half feet across, and the rims were very wide, sometimes eight inches. On the axle between the two wheels was fastened a large box or rack, in which a load of seven or eight hundred pounds was often carried.

Oxen fastened by means of thongs of buffalo hide usually pulled the carts, but sometimes tame buffaloes or ponies were used. One driver had charge of four carts hitched together, simply guiding the head ox. The country over which the Red River carts passed was often swampy and would have been impassable for almost any other sort of transportation. Due to the lightness of the carts and the wide rims of the wheels, as well as to the careful steps of the animals pulling them, these carts could go where anything else would have floundered. The trail left upon the prairie was deeply cut, and ruts might be seen plainly many years after the carts had gone out of use. These carts cost about fifteen dollars each and generally lasted for three trips.

The nearest route to St. Paul from Pembina, in the Red River Valley, was 448 miles. The journey was made in thirty or forty days, fifteen miles being a good day's journey. Usually the carts started as soon as pasturage could be obtained for the oxen. Sometimes there were one hundred carts in a train. The oxen fed on buffalo grass, which grew all over the prairies. The carts came

in sections, so as to give time for new grass to grow in the camping places of those in advance.



COURTESY OF MINNESOTA HISTORICAL SOCIETY

RED RIVER CARTS ON THIRD STREET IN ST. PAUL—PICTURE TAKEN IN
1859

With each section there were generally about twelve men, well armed and mounted on swift ponies. At night a camp was made by placing the carts in a circle with the shafts pointing in. This made quite a strong fort in case of attack. The animals were sometimes allowed to graze on the outside, but sentinels were on guard, for the cargoes were too valuable to run any risk of a surprise attack by the Indians. Although game was abun-

dant, pemmican rather than fresh meat was depended on for food. This would keep any length of time and was very nourishing. It required no preparation; and, as it was often impossible to make a fire when traveling, this was most convenient.

No axle grease was used, and the carts could be heard for three miles. For this reason they were called the "Red River band." One pioneer tells of a minister of St. Anthony, who had just given out his text, when the squeaking of the Red River carts was heard. He hastily said, "To be discussed on next Sunday," and closed the service; for nothing else could be heard when the carts were passing. Although the noise was usually described as nerve-racking, one old-timer says that after traveling alone for days, he sometimes heard the far-off squeaking of the carts, and it was sweet music to him.

The drivers, usually French half-breeds, wore bright-colored sashes and beaded caps and moccasins. This costume may be seen in the portrait of Joe Rolette, in the museum of the Minnesota Historical Society in St. Paul. Remember his name, as you will hear of him again. In the museum there is also one of the carts. If you should go to Rome, you may see on a monument called Trajan's Column, a carving of a cart, which is almost a duplicate of this one. Think of it! These carts were used in Europe over eighteen hundred years ago.

The furs were unloaded at the warerooms of the fur company, where they were repacked to be shipped down the Mississippi to St. Louis or to some other city having

railroad connection with the East. Some of the furs finally reached London.

It was a great day when the Red River carts arrived. Nearly everyone in St. Paul turned out to see them. Generally the drivers camped near Larpenteur's Lake, which was near the old Larpenteur home, at the corner of Rondo and Dale Streets in St. Paul. Besides the furs the carts brought pemmican, buffalo tongues, beaded work, moccasins, gloves, and other small articles made by the squaws. Tourists delighted to visit the camp, and a brisk trade was carried on. In fact, for many years the most interesting events of the summer were centered around these camps and the arrival and departure of the carts.

The money received for the furs was spent freely, and this trade was of great value to the city. Tools, clothing, and other supplies formed the loads on the return trip. Much tobacco was also sold.

St. Paul received its main supply of furs by means of the Red River carts and became one of the largest fur markets in the country. In 1858 six hundred carts came to St. Paul, but with the appearance of the railroads the carts passed away before the progress of civilization. In the year 1867 the yearly visits of the carts stopped, but St. Paul is still one of the greatest centers for fur manufacturing in America.

Stray boats came and went whenever they could get loads that would pay, until the spring of 1847, when a regular line of packets was started between St. Paul,

Mendota, and Fort Snelling, and points down the river. The welcome whistle of the steamboat often caused a stampede, even from church, particularly if it was the first boat of the season. A salute was fired to the first boat by a cannon on a hill not far from the river. A general rush was made to the landing to get the latest news and letters from friends. Settlers began to come by these boats, but the region was quite close to the wilderness still. We read that in passing from Fort Snelling to St. Paul as late as 1849, one quite frequently saw deer and such great numbers of prairie chickens that they seemed to cover the country. Within a few miles of St. Paul, wolves made travel quite unsafe.

The steamboats used on the river were sidewheelers. The upper deck had cabins for passengers, while the lower deck was used for freight. It was interesting to see the unloading of the boats, and many came down to the landing to witness it. In those days Minnesota manufactured nothing and depended on the cities down the river for nearly everything. Most of the food for both man and beast came by these boats.

On the return trip, often to St. Louis, furs were the chief thing carried. It was not an uncommon sight to see acres of bales of buffalo skins near the river, waiting to be shipped. These had been brought by the Red River carts.

The cranberry trade for several years was quite large. The cranberries were gathered mostly by squaws, who traded them for goods at the stores in St. Paul. Many



COURTESY OF MINNESOTA HISTORICAL SOCIETY

STEAMERS AT LEVEE AT FOOT OF JACKSON STREET IN ST. PAUL, 1859
NOTICE THE SIDE WHEEL

and many a barrel was shipped down the river. Minnesota might have developed cranberry culture as her neighbor, Wisconsin, has done, but the promise of early days has never been fulfilled. Lumber also was shipped in increasing quantities. Mr. J. J. Hill tells that as late as 1856, Minnesota was considered good only for lumber, cranberries, and fur. This statement gives a correct idea of the cargoes of the packets leaving St. Paul.

From 1850 to 1858, the arrival of steamboats constantly increased, and often several hundred settlers came

on one boat. In 1855 it is said that 30,000 persons came to Minnesota by steamboat to settle in different parts of the state. The hotels of St. Paul were so crowded that people had to camp in the streets. The climax of steamboating on the river was in 1858, in which year over one thousand steamboats made landings at St. Paul. By the year 1851 St. Paul had a population of over 1,200 and gave promise of becoming a large city.

In 1854 St. Paul was incorporated as a city. Five years previous to this it had been made the capital of Minnesota. The history of St. Paul is closely interwoven with that of the state, and on account of its importance politically and industrially much more must be told about it. This account gives a picture of the beginnings of the great city, and the doings of its people in the early days.

What advantage had St. Paul that made it outgrow Mendota?

CHAPTER IX

THE INDIANS AND HOW THEY LIVED

After reading, try to remember where in Minnesota the Indian race is supposed to have started, and what the Indians could find here but nowhere else in the world.

This whole region at one time was occupied by Indians. Two great nations divided the land; the Chippewas lived in the north and east, and the Sioux or Dakotas in the south and west. When the first white men came to Minnesota, the Sioux held the land around the source of the Mississippi and at the head of Lake Superior. The Chippewas, being a more eastern tribe, were the first to obtain guns from the white people; and at once began to drive the Sioux westward. When Duluth and Hennepin were here, the most important Sioux villages were near Mille Lacs. One hundred years later the Chippewas had driven the Sioux from their old hunting grounds and had taken possession of northern and eastern Minnesota as far west as the Mississippi River. The two nations were great enemies and carried on almost constant war.

The Sioux called themselves Dakotas, which meant allies, but the Chippewas called them by a long name, which they also applied to a snake or to anything they

hated greatly. The last part of this long name was "sioux"; and the French traders, to avoid exciting the attention of the Indians while talking before them, used names which were not recognized. So they spoke of the Dakotas as the Sioux. The Chippewas were also called the Ojibways. Chippewa was the Englishman's way of saying Ojibway.

The Sioux were expert horsemen, living largely on the prairies. They were taller and more graceful than the Chippewas and were quicker in their movements; but the Chippewas, living in the forests, were wonderful woodsmen and had greater strength and endurance. The Sioux called his house a tepee. It had a framework of poles covered with buffalo skins sewed together. The houses or wigwams of the Chippewas were similar to the tepees of the Sioux, except that birch bark was used instead of buffalo skins as a covering. The buffalo was not found in the more eastern region where the Chippewas had lived.

There are many reminders of the red men still with us, the most common being the many beautiful Indian names. Some of these have been translated, but many which are easy to say are still in use in their original form. The most beautiful of these names is Minnesota itself. The name is composed of two Sioux words, "Minne," meaning water, and "Sota," meaning the appearance of the sky when fleecy white clouds are floating slowly and quietly over it. It has been translated *sky-tinted*, so the name Minnesota means *sky-tinted water*.

Many a time a Sioux squaw would explain the name by dropping a little milk into water, and then would call the clouded water "Minnesota."

Other familiar names are Winona, Wabasha, and Mendota. Probably very few ever think of such words as potato and maize as being of Indian origin; but moccasin, canoe, wigwam, and toboggan, in spite of their common use, still bring a strong suggestion of the red man.

Many a legend could be told to prove the poetic nature of the Indians. None is more beautiful than their story of the beginning of the moccasin flower, now our state flower. It tells of a little Indian girl who loved to hunt just as her brothers did. One day in the autumn she wandered off and was surrounded by a forest fire. For many weeks the mother sought for her in vain. The next spring, while still searching, she found two lovely blossoms which were much like the moccasins her daughter had worn, both in shape and color. Then the poor mother knew that she had found the little girl's grave.

Before coming in contact with the white man, the Indian hunted to gain a living and was content when he had enough food and clothing for himself and his family. Game was hard to get near the villages, and long expeditions had to be made to find it. With the coming of winter, it was impossible to get enough food for a large number from one region. For this reason the Indians separated into groups of two or three families and scattered through the country wherever they could find game. A severe winter brought much hardship and sometimes

even starvation to large numbers. The famine described by Longfellow in *Hiawatha* was very much like the one which Radisson and Groseilliers experienced.

The buffalo furnished a great supply of food to the red man. In early days Minnesota was the buffalo's favorite range. The animals arrived in the spring when the feeding grounds were green, and left late in the autumn for the south. In the seventeenth century the



COURTESY OF D. LANGE

MOCCASIN FLOWER—THE MINNESOTA STATE FLOWER

traders in the eastern part of our country, who had traveled a great distance westward, told of "lions' skins" which were not bartered by the Indians because they were used for clothing, being much warmer than other kinds of fur. It is now quite evident that these lions' skins were those of the buffalo. The first engraving of the buffalo is found in Hennepin's book of travels.

In the autumn the Sioux tribes went on a great buffalo hunt to get meat for the winter. As late as 1840 such a hunt took place in Minnesota. An eye witness tells us that, when the frightened animals took flight, the ground trembled as if from an earthquake shock. At this time, of course, the Indians had firearms. For several days the camp was a busy place. The skins were dressed, the tongues cured, and pemmican prepared. The tongue was considered particularly choice; and, at this hunt, 1375 tongues were brought into camp. Since such numbers were killed, it is no wonder that the buffalo is no longer found roaming our plains. A feast always followed a successful hunt at which the tongue and the fatty hump were eaten fresh.

It has been said that no white man could ever make pemmican right. It took an Indian or a half-breed. Some say that pemmican is the most nourishing food that was ever made, and it is certain that the early white men in Minnesota found it very appetizing. It was really an ideal food in many ways, equally good for man and beast; it would keep any length of time, in any weather; it was easy to carry on long journeys, and required no

preparation. As it was often impossible to make a fire while traveling, pemmican, which did not require cooking, was especially fitted for use in extreme northern countries. Pemmican is supposed to have been invented many years ago by the people living near Hudson Bay. This is the way it was made. The buffalo meat was well boiled and then picked into very small pieces. A sack made of buffalo skin, with the hair on the outside, was made ready for the meat; a sack held about ninety pounds. A hole was then dug in the ground large enough for the sack to fit into. The shredded meat was packed into the sack and pounded until it was as hard as it could be. Then a kettle of boiling hot buffalo fat was poured over the meat, filling all the spaces, until no air could penetrate the solid mass. In fact it was as well preserved as if it had been sealed in glass jars. Pemmican was a favorite food of the Indians.

To the Indians who lived in the forests the deer was as important a source of food as the buffalo was to the men of the plain. However, the food of the Indians consisted of many other things besides meat. When Father Hennepin first arrived at Mille Lacs, the party feasted on wild rice and dried blueberries stewed together and served in large dishes of birch bark. This was a most welcome treat to the white prisoners, who were nearly famished after their long march. Blueberries were plentiful in many parts of Minnesota, and the Indians gathered large quantities of them, which were dried and kept for special occasions.

Hennepin describes Mille Lacs as spreading out into great marshes of shallow water filled with wild rice. He tells how the Indian women tied the rice into bunches in the ripening season, to prevent its being eaten by ducks and other birds. When ripe, the slightest touch shakes off the grain. At harvest time the squaws went in canoes among the rice plants, which grew two or three feet above the water. They bent the heads of grain over the sides of the boats in handfuls and beat out the seeds with sticks, continuing until the boats were well loaded. Sometimes one canoe would collect thirty bushels in a day. The rice was then spread out in a dry open space, where it dried for a few days. Afterward it was heated in kettles and made thoroughly dry. Next a hole was dug in hard ground, the inside of which was beaten hard and smooth. This bowl-shaped cavity held one-half bushel of rice. Forked sticks, six or seven feet long, were driven into the ground near the hole on two opposite sides. In the forks a small pole was laid. Then an Indian holding on to the pole with both hands stepped barefoot on the rice, in this way treading off the hulls. Strange to tell, this was always done by a man; and some say that this is the only kind of work which a male Indian was ever known to do. The rice was then taken out of the hole and winnowed by the wind. Usually about a quarter of the hulls were still left on the grain, but neither these nor the dirt from the treading feet seemed to trouble the Indians, who never bothered to wash it before cooking it. The rice was put into baskets and buried in dry



COURTESY OF MINNESOTA HISTORICAL SOCIETY

KEEPING CROWS FROM THE CORNFIELD

places until wanted, the holes first being lined with dried grass or bark.

If the water in the lakes was unusually high, the crop of wild rice was nearly a failure for that season. Well dried corn was put in sacks and buried in the ground in the same way that the rice was stored. An early missionary writes of an Indian's garden as consisting of a few square rods planted with a little corn and a few squashes. Cultivating the ground was considered the work of women. This shows how the Indians humiliated Father Hennepin, by making him plant their corn and care for it. Corn was seldom raised in large quantities; and much of the crop was picked before it was ripe, for the Indians liked to eat green corn.

The same missionary states that very few potatoes were raised, also that fish instead of bread was the staff of life to the Indians among whom he lived near Leech Lake. Here, as elsewhere, all things were owned in common; and if one Indian had anything to eat, his neighbors were allowed to share it with him.

What with game and fish, together with wild rice, corn, and berries, there was quite an attractive as well as a healthful variety in the red man's food. To this list we may add maple sugar, which was enjoyed by old and young alike, but was the special treat of little Indian boys and girls.

It is interesting to know that the Indians, who still live in northern Minnesota, do many things much as their ancestors did before the white man came among them.



COURTESY OF NORTHERN PACIFIC RY.

INDIANS GATHERING WILD RICE. THESE INDIANS GATHER WILD RICE
ON THE NORTHERN LAKES JUST AS THEY DID CENTURIES AGO

They pick blueberries, often selling them to the grocery stores in the towns. As the harvest time for the wild rice draws near, one may see an Indian family bound for the rice marshes in an old wagon drawn by a hungry looking horse. The picture is stranger yet when a battered old Ford is substituted for the horse and wagon. Among other things carried is a canoe, which of course is needed in gathering the rice. After the rice has been harvested, cranberries are ready. One may see the

Chippewa Indians near Cass Lake doing all of these things; and, no doubt, some of you have seen similar sights in other parts of the state.

The Indian canoe was made in various sizes. General Cass tells of ordering a large canoe, five feet in width and thirty-six feet in length. A large company of squaws and children began the work. They drove stakes into the ground to mark the size of the canoe to be built; and then they fastened rolls of birch bark to the stakes, stitched together with the tough roots of the tamarack or larch. The rolls of birch bark were large, for in the spring the skillful hands of the Indian could strip the bark of the birch tree from the trunk in one unbroken piece. Next, a framework of cedar was fitted into the bark, giving it the shape desired. Pitch or resin from the pine was then used to make the seams water-tight. When the canoe had been ornamented on the sides, probably with porcupine quills and some vegetable stain, it was ready to deliver to General Cass.

In *Hiawatha* Longfellow gives a beautiful description of the building of a canoe, which ends with these lines:

Thus the Birch Canoe was builded
In the valley, by the river;
And the forest's life was in it,
All its mystery and its magic,
All the lightness of the birch-tree,
All the toughness of the cedar,
All the larch's supple sinews;
And it floated on the river
Like a yellow leaf in Autumn,
Like a yellow water-lily.

These canoes were so light that it was possible to carry them from one stream to another; but if the ground were rough or muddy, it was not easy to make a portage. When heavily loaded, more than one trip had to be made across the portage, the goods being carried in packs on the men's backs. Do you remember what a hard time Schoolcraft had in going from the St. Louis River to the Mississippi?

All the early explorers refer to the calumet or Indian peacepipe. These pipes were made of pipestone, which is a blood red stone with dots of a fainter shade of the same color. It is obtained from a quarry north of the



INDIAN CANOE ON LEECH LAKE

town of Pipestone, in the southwestern corner of our state. This is said to be the only place in the world where the stone is found. The first quarrying was done here hundreds of years ago. To the Indians of North America this spot was the center of the world, as they believed their race started here.

The legend runs that the Indians of all tribes took refuge here from flood, and that all their flesh mingled to form the pipestone. For this reason the place was always neutral. As the flood waters rose higher and higher, a beautiful maiden grasped a branch of a tree growing at the top of the highest rock. The legend goes on to tell how this Indian girl, the only one saved, was married to the war eagle which soared above the floods. From their descendants the earth was again populated. The reed stem of the peacepipe was decorated with eagle feathers in honor of the founder of the race.

The stone is soft when first taken from the ground and so easy to work that the Indians were able to make wonderful pipes, many of which may still be seen in the museum of the State Historical Society. At a council the chief smoked the calumet first, and then it went around the circle, and each man took a whiff in silence. At the end of the council the peacepipe was smoked again to signify that the agreement would be binding to every one present. In Minnesota the pipe was filled with the dried leaves of the dogwood, which they called "kinnikinnik," for tobacco was not known to the Indians of this section until the white traders brought it. However, it quickly

became one of the most important articles of trade.

It is said that in by-gone days, hostile tribes did not molest each other when they met at the quarry while obtaining material for pipes. Many doubt the truth of this; but from the fact that calumets made of pipestone have been found even in Georgia and New York, we judge that Indians from far and wide held the red stone sacred.

Early visitors to Minnesota often paid a visit to the famous pipestone quarry, among them the explorer, Nicollet, and in his party, John C. Fremont, later General Fremont.

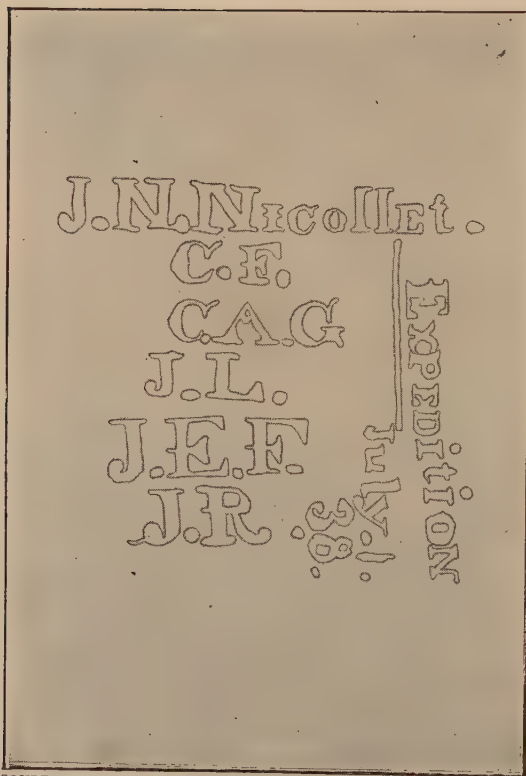
Let us, too, make a pilgrimage to this famous spot. For hours before we reach the town of Pipestone, we are going up hill, but so gradually that much of the time we scarcely seem to be ascending. Here the land rises to the height of 1700 feet. This is the Coteau des Prairies, or as Longfellow calls it in *Hiawatha*, "the mountains of the prairie." This ridge divides the Missouri from the Minnesota River, and the Indians say that it was once an island. As the name of the ridge indicates, we are in the prairie region, where trees are very rare, except where they have been planted. Most of the trees, which have been planted as windbreaks, are around the farm-houses. These groups of trees look like islands in a great green sea of grass or growing grain.

When we reach the town of Pipestone, we make inquiries and are told to drive north for about three quarters of a mile to reach the quarry. At the end of the street

we can see a group of buildings. We learn that this is an Indian school, and that the United States Government has made a reservation of about one square mile of the land extending to the southwest of the school property. The few Indians who are now alive still hold the quarry in great reverence; the government has secured for the Indians the sole right to get the pipestone, which they prize very highly.

Walking a short distance from the road, we notice an iron fence enclosing a square space and near it a bronze tablet. We read the inscription and find out that the tablet was placed here by the Daughters of the American Revolution in memory of the fact that the "J. N. Nicollet Expedition of 1838 rested here three days." It gives us a thrill when we see carved on the solid rock within the enclosing fence, "J. N. Nicollet," followed by the initials of the different members of his party. First is "C. F." which stands for Fremont, who was called Charlie at that time by his friends. At the side is carved, "Expedition July 1—38." It is hard to realize that these letters have been there so long, for they are as plain as if just made. The rock is red in color and very hard, while the carved out letters are a lighter red. The party spent three days in exploring this famous region and assisted the Indians in opening a new quarry.

Going on, we enter a rocky glen. The rocks rise to a great height, and it is easy to imagine the form of a human face on one rock. Long before we find it, we hear the sound of falling water. Following a small stream



COURTESY OF MINNESOTA HISTORICAL SOCIETY

INSCRIPTION MADE BY NICOLLET'S PARTY ON
ROCK NEAR PIPESTONE QUARRY

bordered with lovely wild flowers, we come to a little waterfall, which seems to come right out of the rock. Birds start up at our approach, for they are not used to any disturbance in this wild spot. Everything is wonderfully beautiful except the mosquitoes, which nearly eat us up.

Crossing an open space we come to the red pipestone quarry. Close to it are some great granite boulders which the Indians still worship. No one can tell how long ago the Great Glacier brought these rocks from the north and left them here. They are called the "Three Maidens." Before beginning their quarrying, the Indians laid an offering at their feet to win their favor. Maybe a strangely carved stone was reverently placed near the boulders.

We have read that the pits, where the stone has been removed, used to be filled with water when the rains were heavy, completely covering the pipestone. Buffaloes came here to drink, and at such times the Indians would steal upon the thirsty animals and easily shoot them. Now we scramble down into the quarry, which is strewn with broken rock. Thin layers of pipestone lie under five feet of a much harder rock called quartzite, sometimes known by the name of jasper. With their crude tools, it must be difficult for the Indians to dig the pipestone out. No one but the Indians is allowed to take the stone.

An Indian camp is quite near. Walking over to it, we find an old man working with his file on a piece of the red stone. He speaks proudly when he tells us that he

is a Sioux Indian from South Dakota. In the summer he and his family come here to camp, and he earns a little money by selling what he makes to tourists. In spite of what we have read of the stone being soft and easy to shape, the old man seems to have to work hard on the little horseshoe he is making. He generously gives us some pieces of the pipestone as souvenirs. The stone is smooth and has a soapy feeling.

On our way back to the town we notice the red dust from a quarry, where quartzite, a remarkably hard stone, is being cut. Many of the buildings in the city of Pipestone are made of this red stone, which is very different from pipestone. Thick blocks of quartzite are quarried, whereas pipestone is found only in rather thin slabs.

When we get home, we shall enjoy reading what Longfellow has written in *Hiawatha* about the pipestone quarry. Doubtless we shall find other legends about the place, for the Indians have told many.

If you read early Minnesota history, you will find that the first Legislature, meeting in 1849, passed a resolution ordering a slab of red pipestone to be sent to the Washington Monument Association. Mr. Henry H. Sibley had seen the request that each state contribute some piece of stone to be used in the construction of the monument. Thinking it well that the new territory of Minnesota should be represented, he called the attention of the Legislature to the matter. Mr. Sibley gave the slab to this body, who sent it on to Washington in the name of Minnesota territory.

An amusing story is told by the pioneers about the first bricks which were used in Minnesota. Misled by the red color, the Indians took the bricks for red pipe-stone and smuggled them away, well hidden under their blankets. Imagine their disappointment when they tried to cut them and discovered their mistake.

Much more could be told of the red man—of his weapons, his dances, and his games. In spite of what we may think of them, the savages held the Americans in greater respect than they held any other white people. Pike tells us that, when the Indians referred to our warlike achievements, they said that the Americans were neither Frenchmen nor Englishmen, but white Indians.

Although one might tell of the cruelty of the Indians, you can see from this account that there is also much that is pleasant and interesting to learn of our red brothers.

What were some of the things which the Indian children did that would appeal to our boys and girls now?

CHAPTER X

ALEXANDER RAMSEY AND HIS TIMES

In reading of our first governor, find out and remember the value of an honest man in office.

When the population of a new part of the country was large enough, that region wished to become a territory. One of the chief reasons was that then definite laws could be agreed upon and men appointed, not only to see that the laws were carried out, but also to punish wrong doers. In 1846 a bill was introduced in Congress for the organization of the territory of Minnesota. This bill was referred to the Committee on Territories, of which Mr. Stephen A. Douglas was chairman. This name is often connected with that of Abraham Lincoln. Mr. Douglas reported in favor of the proposed new territory, giving it the name of Itasca.

A discussion arose in the House of Representatives in regard to the name. One Congressman wished the name of Chippewa to be substituted for Itasca; and a Southern delegate, who disliked all Indian names, favored calling it Jackson. Another member, thinking that one territory should be named for the "Father of his Country," suggested Washington. After much talk all these

names were rejected and the original name of Minnesota was placed in the bill. The bill failed to be passed. The reason given was that the population was altogether too sparse to warrant the making of a new territory. In 1848 the bill failed again.

In the summer of 1848 a number of prominent residents of the proposed territory called a convention, which met in Stillwater. This convention sent a communication to the President and another to Congress, earnestly requesting that the new territory be organized. Soon after this a new delegate to Congress was elected in the hope that he could persuade the statesmen at Washington to take immediate action. It was possible to do this because the eastern part of Minnesota was still looked upon as part of Wisconsin territory, although Wisconsin had become a state a few months before. Owing to a change in boundary, the part mentioned had not been included in the new state. It was quite a mixed up condition of affairs, but the fact remained that Mr. Henry H. Sibley, who was elected delegate, entered Congress as a representative of Wisconsin territory.

On the last day of the session, March 3, 1849, Mr. Sibley had the pleasant surprise of seeing the Minnesota bill pass without opposition. This success was largely due to Mr. Stephen A. Douglas, who had visited Sibley at his Mendota home. Mr. Douglas was so favorably impressed with the location of Mendota that in the bill he named this village instead of St. Paul as the capital of the territory. He had visited a hill back of Mendota,

called Pilot Knob, from which he had obtained a wonderful view of the surrounding country. In drafting the Minnesota bill, Mr. Douglas had this place in mind as a location for the capitol building. Mr. Sibley was much troubled when he heard of the change and urged St. Paul as the capital. He owned more property in Mendota than any one else. If Mendota had been made capital, he would have become a very rich man; but it did not seem honest or right to him to go against the wishes of those who had elected him. At last Mr. Douglas was won over by Mr. Sibley and unwillingly consented to having St. Paul named as capital.

The territory of Minnesota extended on the west to the Missouri River. Most of the region included in the new territory was little more than a wilderness, and, in fact, much of the land still belonged to the Indians. The white people lived mostly in St. Paul, Stillwater, and St. Anthony. Almost everything used by the whites was brought up the river by steamboats. Even forage for horses and cattle was obtained in this way.

Although the bill was passed in March, it was more than a month before the good news of the organization of the territory reached Minnesota. Her people anxiously waited for the first steamboat while the ice still held a firm grasp on Lake Pepin. On the evening of Monday, April 9th, amid a terrific thunderstorm, a shrill whistle was heard. The flashing lightning disclosed the longed-for boat, the Dr. Franklin, less than a mile below St. Paul. The news spread through the town; and regardless of

wind, thunder, and pouring rain almost the entire male population rushed to the landing. Before the boat was safely moored, the shouts of the excited crowd rang far and wide announcing that there was a territory of Minnesota, and that St. Paul was the capital.

In March, 1849, President Zachary Taylor, who, you remember, had been in command of Fort Snelling some years before, selected Alexander Ramsey as the first governor of Minnesota. Governor Ramsey had been a member of Congress from Pennsylvania. So little was known of the region to which he had been appointed, that, while he was getting ready to leave his Pennsylvania home, his friends asked him if he intended to go to Minnesota by way of the Isthmus of Panama, or whether he would take the trip around Cape Horn by sailing vessel. As a matter of fact he traveled from Milwaukee to Prairie du Chien by stagecoach, and there he took the steamboat, Dr. Franklin.



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SOCIETY

ALEXANDER RAMSEY

On the twenty-seventh of May Governor Ramsey reached St. Paul; but as no suitable house was ready for him, he became the guest of Mr. H. H. Sibley at Mendota. He did not stop at St. Paul, but went right up the river in the steamer to Mendota. With his wife and child he came down to St. Paul in a birch canoe on the twenty-fifth of June. After landing, they proceeded to a house which the governor had rented. Mrs. Ramsey and her little son sat on trunks in an ox wagon, and the governor walked at the side of the wagon.

The next day the governor secured the good will of his fellow-townsmen by subscribing five dollars for a town pump, a much needed public improvement.

In this first home of the governor it was not uncommon for Mrs. Ramsey to entertain her lady friends while her husband talked with his Indian visitors at the other side of the room.

Soon after his arrival Governor Ramsey had a census taken of the population of Minnesota. Counting 317 soldiers at Fort Snelling, as well as many traders at outlying posts, the figures reached less than 5,000. In fact a great part of this number had very recently come up the river with hopes of making their fortunes.

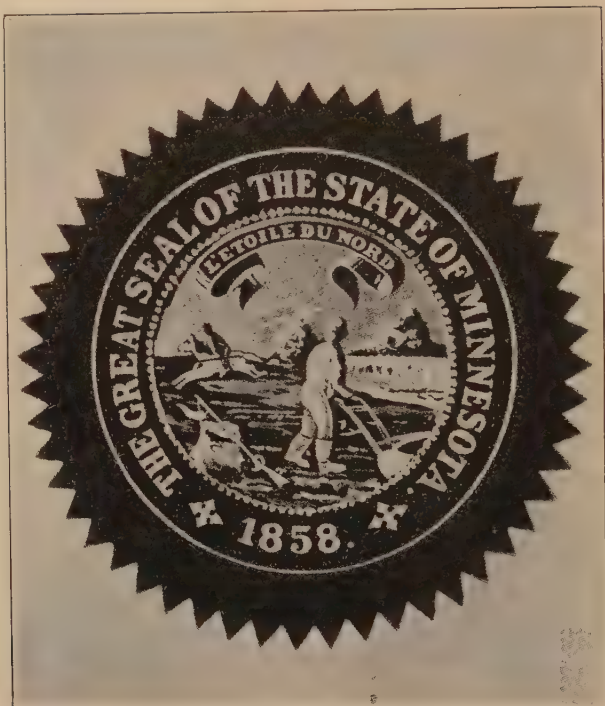
In the following September the first Legislative Assembly met in St. Paul. There was no public hall, so the meetings were held in a hotel called the Central House. At dinner and supper time the legislators were obliged to adjourn to allow the servants to set the tables. As the flag was run up the staff in front of the house,

a number of Indians sat on a rocky bluff not far away and gazed at this new sight—no doubt a sad one to them.

We have already heard how this first Legislature, at Mr. Sibley's suggestion, arranged to send a slab of pipe-stone as Minnesota's contribution to the Washington Monument. The greatest thing accomplished, however, was the founding of the Minnesota Historical Society of which Governor Ramsey became the first president.

The new territory needed a seal with which to stamp all government papers. On the last day of the session Governor Ramsey and Mr. Sibley were entrusted with the task of providing a seal and a motto. With the help of artists in Washington they tried to work out a design which would show the feelings of the people at the time. The first seal was not entirely satisfactory; so, after Minnesota became a state, the design was changed to the one now in use. Examine the seal carefully, for it tells its story in very positive language. You can see a white man plowing the land where he now has made his home. Near him lies a powder-horn and gun. An Indian is riding at full speed toward the setting sun; this means that the white man and civilization are here to stay and that the savage Indian must go. In the distance may be seen the Mississippi River and St. Anthony Falls. The French motto at the top, "L'Etoile du Nord," means "The Star of the North." The use of the French language honors the early explorers of our state.

An interesting event of 1850 was the Indian council at



COPY OF STATE SEAL

Fort Snelling, called by Governor Ramsey for the purpose of settling the troubles between the Sioux and the Chippewas. He began his speech by telling the Indians that they were meeting under the flag of the Great Father, the President, to settle their difficulties and to bury the hatchet. Then he told them to leave off war and to learn that a bushel of potatoes was worth more to one who is hungry than a pile of eagle plumes. The

white people, he said, had long before had the Indian notion about labor, but they now had changed. The two tribes agreed to be friendly, just as they had often before agreed to be. The governor presented each party with an ox for a feast, and the council ended.

The first Thanksgiving in Minnesota was celebrated the year after the territory was formed. It seems strange to hear that the day appointed by Governor Ramsey was the twenty-sixth of December, and the next year it was the eighteenth of the same month. At that time there was no regular day for Thanksgiving, as there is now.

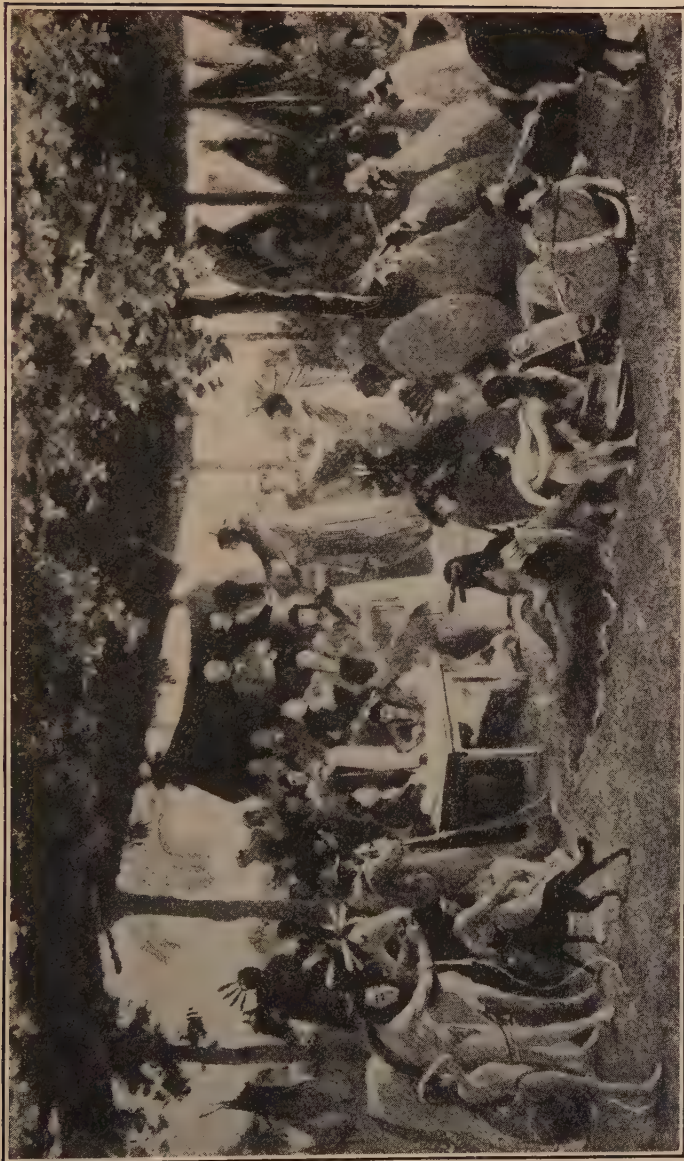
The second meeting of the Legislature was held in 1851. After much bitter discussion the capital was permanently located in St. Paul. In order to get enough votes for St. Paul, the State Prison was given to Stillwater and the University to St. Anthony.

Although Ramsey was governor of a vast territory, most of it belonged to the red men. In fact there was only a little land where the white settlers were free to live. This land lay mostly between the Mississippi and the St. Croix Rivers. The government was urged to make a treaty with the Sioux Indians in order to secure the land lying in the southern part of the territory, west of the Mississippi River. The President of the United States appointed two special commissioners to arrange a treaty; one of whom was the Commissioner of Indian Affairs, and the other was Governor Ramsey. There were two divisions of the Sioux tribe, known as the Lower and Upper Sioux. Feeling sure that the Upper Sioux

would be more ready to sell their lands to the whites, the commissioners decided to treat with them first.

In June, 1851, the commissioners set out from St. Paul by steamer for Traverse des Sioux on the Minnesota River, the place chosen in which to meet the Indians. This was an old trading post located near the present city of St. Peter. The name means the *crossing-place of the Sioux*. They carried much food and many gifts with them. When they arrived, they found no Indians excepting those who lived nearby. Although the poor red men knew that they would have to give in to the whites, they were not eager to surrender their lands. It was three weeks before a large enough number was gathered here for the commissioners to begin the business of arranging the treaty. The Indians who did come feasted on the food which the white men had brought. They played games and performed wonderful dances, enjoying themselves in care-free fashion, and at the same time entertaining the white men. There were about thirty-five white men and in time more than one thousand savages.

A great bower roofed with green branches was built high above the river, under which the commissioners and the chiefs gathered for the treaty council. On a large boulder near the treaty bower, chests of gold promised as the first payment to the Indians were displayed, along with beads, glittering mirrors, knives, and guns. As one might suppose, these were carefully guarded. The chiefs almost broke up the council with their delays and objections. Finally the commissioners told them that, if they



FROM PAINTING BY MAYER. COURTESY OF MINNESOTA HISTORICAL SOCIETY

TREATY OF TRAVERSE DES SIOUX. GOVERNOR RAMSEY IS SHAKING HANDS
WITH AN INDIAN CHIEF

did not wish to make a treaty, no more food would be given out; and that the white people would return to their homes. At last they came to terms and signed the treaty. The commissioners had made a good bargain, buying for the government over twenty million acres of land at about seven cents an acre.

Just as soon as the commissioners had returned to St. Paul from Traverse des Sioux, the Lower Sioux were called together at Mendota. These bands were more unwilling to let their lands go than the Upper Sioux had been. Although some of the Indian leaders threatened to shoot the first chief to sign the treaty, terms were finally agreed upon. Little Crow, who had more influence with his people than any other chief, was the first to sign. In all sixty-five chiefs and warriors signed, but Little Crow was the only one who knew how to write his name. The signing of the treaty of Mendota took place on the hill known as Pilot Knob. The first meeting of the council had been held in a warehouse, which was hot and stifling when crowded with people. As the Indians refused to meet again in this building, the meetings were continued under an arbor which had been built on the top of Pilot Knob.

The next day \$30,000, which had been set apart by a previous treaty, was given to the Lower Sioux. In the week following they crowded the streets of St. Paul with their sacks of money, spending it for anything they pleased. About \$10,000 went for horses, many of which were good for nothing.

The Upper and Lower Sioux bands were each to receive about one and a half million dollars. This large sum was not all to be given at once, but annual payments were to be made, partly in cash and partly in food and goods. A portion of the money was to be used for education. All the lands belonging to the Sioux in Minnesota were given to the white people except the two reservations where the Indians were to live. The Upper Sioux were to settle on a reservation extending for ten miles on each side of the Minnesota River, running from Lake Traverse on the west, down to where the Yellow Medicine River joins the Minnesota. A similar strip which ran for sixty miles farther down the Minnesota River was reserved for the Lower Sioux bands.

When the treaties were sent on to the Senate at Washington to be signed, some of the Southern senators opposed them because the land thrown open would be settled by people who were against slavery. More delays followed, but finally the treaties were accepted. The Indians were not anxious to move on to the reservations, and for years some of them led a wandering life in the valley of the Minnesota River. They often annoyed the white settlers who at once began to seek homes in the rich farm lands of the great Minnesota prairies.

With the opening of new land to white settlement, the city of St. Peter was founded. The old trading post of Traverse des Sioux became less important and was finally taken into the new town.

During the year of 1855 and the two years following,

the population of the territory grew very rapidly. Sometimes several steamboats arrived from down the river in one day. A steamer often landed two hundred passengers, and as many as six hundred have been recorded.

Fur trading had decreased because so many animals had been hunted. Lumbering was now drawing great numbers of people to Minnesota, but there was plenty of room for all who came to make their homes. After much speculation in land the people settled down to develop the natural resources of the country.

There were now several towns in Minnesota and every now and then there was talk of changing the capital from St. Paul. In 1857 both branches of the Legislature passed a bill to move the capital to St. Peter. Joe Rolette, who was chairman of the committee through which all such bills had to pass, was a good friend of St. Paul. You remember that his picture, in the costume of a driver of a Red River cart, hangs in the museum of the Minnesota Historical Society. Rolette instantly decided that the members of the Legislature should never see the bill again, so he put it into his pocket and disappeared. When the bill was called for, he was nowhere to be found. The sergeant-at-arms was sent to hunt for him, but all in vain. For six days the law-makers remained in session, their meals as well as bedding being provided by a hotel nearby. Some one substituted a copy of the bill, but the court held that it had not been passed lawfully. All the while Rolette was hiding in an attic room of a hotel called the Fuller House, having a jolly time. Of course the

people of St. Paul were everlastingly grateful to him for preserving their city as the capital. Although Rolette's life was threatened by persons who wished the removal of the capital, no harm was done to him.

While Rolette was in hiding, many stories were afloat. Some said that they had seen him with his dog train going



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JOE ROLETTE. THE DRIVERS OF
THE RED RIVER CARTS WORE
SASHES LIKE THE ONE
IN THE PICTURE

home to Pembina in the Red River Valley. This dog train was well-known for Rolette had been elected many times as a member of the Legislature, and it was quite an event each winter when he arrived in St. Paul. His three dogs were harnessed in tandem fashion, and jingling bells announced their approach. During the long trip from Pembina he averaged thirty-five miles a day. He fed his dogs only once in twenty-four hours. Every night each dog was given a pound of pemmican. One winter, when the snow was two feet deep, Rolette walked all the five hundred miles from Pembina to St. Paul on snowshoes. Some old settler has said, "What would a Minnesota Legislature those days be without Joe Rolette?"

In 1857 Minnesota was estimated by her own people to have a population of 250,000. No doubt 150,000 would have been more nearly correct. The year before this our delegate to Congress had taken steps toward making Minnesota a state. In a territory the salary of the governor and of the delegate to Washington, as well as that of some other officers, was paid by the national government. Because a state paid its own running expenses, Congress liked to have a territory become a state. On the other hand at this time the South opposed making Minnesota a state because she was sure to be against slavery. Mr. Stephen A. Douglas again lent his help, and on May 11, 1858, Congress passed the bill admitting Minnesota. Our state was the thirty-second to be admitted to the Union, and the thirty-second star was added to the flag in our honor. The first state governor was

Henry H. Sibley; the second was Alexander Ramsey. During Ramsey's term of office the Civil War broke out, and he was our great "War Governor."

When Governor Ramsey entered upon his duties in January, 1860, he urged that the expenses of the state be reduced, and that the state money should not be wasted. He followed this up by cutting down his own salary from \$2,500 to \$1,500. Other reductions were made, so that the expense of running the state was cut to about half.

Governor Ramsey served his state and his country in many ways. In 1863, while still governor, he was elected to the United States Senate, holding office for twelve years. Later he was Secretary of War under President Hayes. After filling this position, he made his home in St. Paul, devoting much of his time to the affairs of the Minnesota Historical Society, which he had helped to organize in territorial days.

Of all the services which he rendered to Minnesota, the greatest of all was his sturdy defense of the school lands of the state. The United States Government always grants a certain amount of land for schools in each state. In 1849, the year in which Minnesota became a territory, Congress provided that two sections in every township should be set aside for school purposes. Governor Ramsey stood like a rock against the schemes of land speculators to get control of these school lands, at prices which were too low to give the schools a fair return. He insisted that all money obtained from the sale or use of these lands should be set aside for the schools. As only the

interest was used, a permanent school fund was established. Large sums were derived from the sale of timber and later from the sale of iron ore. One section in the rich iron district has provided a greater revenue than the states of Michigan, Wisconsin, and Iowa together have received from all the school lands which Congress granted to them. If it had not been for Governor Ramsey, the rich ore lands would have been sold long before iron was discovered on them. It is largely due to him that Minnesota now has a permanent school fund of about twenty million dollars. On account of his service he has been called the "Father of the Minnesota School Fund."



FIRST STATE CAPITOL OF MINNESOTA—BURNED IN 1881

It was mentioned earlier in this chapter that the first Legislature held its meetings in a small hotel for want of a better place. The first capitol was completed in 1853 and was used for twenty-eight years. Candles provided the lights at evening sessions, and in winter there were four large box-stoves, made of iron, in each assembly room to furnish heat. However, on a cold night the air was decidedly chilly. This building had been recently improved and enlarged to about four times its original size. On the evening of March 1, 1881, while crowded with visitors, the dome was found to be on fire. The flames had worked their way through the walls from the lower part of the building and had gotten such a start that the whole structure was destroyed. Fortunately most of the furniture and the records of various departments were removed. The law library was nearly all lost, but the valuable papers and books of the Minnesota Historical Society were saved.

Another capitol was started at once and was ready for use in 1883. In a few years this was too small, and plans were begun for the present beautiful new capitol. The cornerstone was laid on July 27, 1898, by Alexander Ramsey. The silver trowel which he used was presented to him by the state.

It has been said that Ramsey's life work was itself a cornerstone in the foundation of our great state. From the time when he was first appointed governor until his death in 1903, his life was one of whole-hearted, intelligent service to Minnesota. He lived to see her grow from

a wilderness to a rich and highly developed state. Ramsey County and Ramsey State Park are reminders of his honorable name to the people of the state at large, and in his home city of St. Paul, Ramsey Street and the Ramsey School also keep his name in mind.

For his great service in protecting the school lands of the state, if for nothing else, Alexander Ramsey should be remembered for all time by the people of Minnesota.

History tells us of many treaties with the Indians. One of the most famous was made by William Penn. It has been called "the only treaty never sworn to and the only one never broken." Compare Penn's treaty with those mentioned here, noting points of similarity and points of difference. In Chapter XII, we shall read how the terms of the treaties with the Sioux were broken.



DOG SLEDS

CHAPTER XI

MINNESOTA IN THE CIVIL WAR

As you read this chapter, be proud of how a young state set a good example to older states.

You have heard that Alexander Ramsey was known as our great "War Governor." No one could have been prompter than he in coming to the country's aid in time of need. He was in Washington on April 14, 1861, the day on which Fort Sumter was occupied by the Confederates. Hastening to the War Department he offered to furnish one thousand men from Minnesota for immediate service. Many men had already been drilled, for Mr. Sibley had previously organized a militia in the state. The Secretary of War asked Governor Ramsey to put the offer in writing. This was the first regiment in the whole United States to be offered. As Minnesota was one of the youngest states in the Union, having been admitted only three years before, this fact is something to be proud of. It also set a good example to the older states, some of which were slow to come to the front. Calling on President Lincoln the next day, Governor Ramsey repeated his offer of troops. He then telegraphed the President's acceptance, and the acting governor at once

proclaimed to the boys of Minnesota that volunteers would be received.

Men responded quickly and eagerly. In less than two weeks ten companies, nearly full, were mustered into service at Fort Snelling. Governor Ramsey placed Willis A. Gorman in command of this regiment. Colonel Gorman had been an officer in the Mexican War and also the second territorial governor of Minnesota. Under this experienced soldier the boys soon had a taste of real military discipline.

While the regiment was still in camp at Fort Snelling, the War Department requested that all officers and men, who had enlisted for three months, enlist for three years instead. By this time people in Washington realized that the war would last much longer than they had first thought. The commissioned officers consented unanimously, but some of the soldiers could not promise to leave their homes for so many years. However, there was no lack of volunteers to take their places. In fact one of the difficulties, which had to be met, was that there were too many volunteers for this first regiment. The people of the neighboring cities were greatly interested in the Fort Snelling camp, and coaches carried visitors back and forth.

In May the state supplied the men with black trousers and slouch hats of black felt. These were worn with red shirts. This uniform was used until the regular army uniform could be furnished. The women of Minnesota gave a flag to the First Regiment, which was presented

by Mrs. Ramsey to the soldiers in front of the capitol in St. Paul.

On June twenty-second the First Regiment paraded for the last time at Fort Snelling. After an address by the chaplain the men were taken in two steamboats to the upper levee of St. Paul, then marched through crowded streets, to the lower landing. The troops went by boat to Prairie du Chien and from there by rail to the East, going into camp near Washington.

The first battle in which the First Minnesota took part was Bull Run. Although it suffered the heaviest loss of any Union Regiment taking part in the battle, in the report to the War Department the men were praised for their conduct under fire. Some think that the uniform which they wore made them easy marks for the enemies' bullets.

By the census of 1860 the population of Minnesota was only 172,000. Nevertheless she furnished 22,018 soldiers to defend the Union—more than one eighth of the entire population, and at a time when every man was needed at home. Only those who lived here at that time could appreciate the sacrifices and hardships of the people who stayed at home. Like most frontier states Minnesota had among her people large numbers of young, unmarried men. The average age in all the eleven regiments which went from Minnesota was nineteen years. Thousands, however, left families behind them. Along with the native born Americans who enlisted, were hundreds of fine men, who had come from European countries, to find

a home in Minnesota. Scandinavians, Germans, Scotchmen, and Irish fought side by side with Americans in the Minnesota regiments.

All through the four long years of the war, the Minnesota boys were a credit to the state and many times won praise for their bravery. The Fifth Minnesota is said to have saved the day at Corinth. For years afterward the men of this regiment used to recall the fearless deeds of their young chaplain on the battlefield. This young man was later Archbishop Ireland of St. Paul. Two of our regiments were with Sherman in his march to the sea.

It has often been said that in the whole war there was nothing more brave and noble than the charge of the First Minnesota at the battle of Gettysburg. The regiment had been so reduced by disease and losses in former battles that only two hundred and sixty-two men took part at Gettysburg. The Minnesota troops were held in reserve until late in the afternoon of July second. The Union Army was having a hard time, for reserve troops did not arrive as expected. Just as the Confederates were about to get possession of Cemetery Ridge, General Hancock rode up to Colonel William Colvill, in command of the Minnesota men.

"What regiment is this?" he asked.

"The First Minnesota," was the answer.

"Charge those lines," he ordered, and pointed to the advancing rebels.

Down the slope dashed our men. Nearly at the foot of the slope, Colonel Colvill gave the order, "Charge

bayonets!" The Minnesota troops struck the Confederates on the run. In his report of the battle, the Confederate general stated that he was obliged to withdraw his men to prevent their entire destruction. Cemetery Ridge was saved, and this had much to do with winning the battle.

Of the two hundred and sixty-two men who made this famous charge, only forty-seven were uninjured. The others were killed or wounded on the field. This is said to be the heaviest loss in the war records of modern times.

Thirty-four years later on July 2, 1897, a fitting monument made of granite and bronze was unveiled on Cemetery Ridge, where the Minnesota troops made their charge. The state bore the expense of transporting to Gettysburg all the surviving members of the First Minnesota Regiment who were able to make the journey. General Colvill, although crippled for life while leading his men in the Gettysburg charge, made an address.

A few years after General Colvill had peacefully ended his days at the Soldiers' Home in Minneapolis, his statue was unveiled in the State Capitol. Nearby may be seen a bronze tablet in memory of the gallant First Minnesota Regiment with special mention of the Gettysburg charge.

So the men of Minnesota did their part in the Civil War.

Again in the war with Spain in 1898, Minnesota was the first state to respond to the call of President McKinley for volunteers. With the same courage our boys



PHOTO BY W. H. TIPTON, GETTYSBURG, PA.

MINNESOTA MONUMENT AT GETTYSBURG—UNVEILED ON
CEMETERY RIDGE, JULY 2, 1897

faced danger once more in the World War. The spirit of the Grand Army of the Republic lives on. Although we all hope that the boys of today will never have to sacrifice their lives in battle for the defense of their country, this same spirit will lead them to become noble and self-sacrificing citizens of this great and glorious state.

Of the charge of the First Minnesota at the battle of Gettysburg, it has been said, "There is no more gallant deed recorded in history." Tell why this was said. Have you seen the fine painting called "The Battle of Gettysburg" in the governor's room at the State Capitol?

CHAPTER XII

THE SIOUX MASSACRE

When Little Crow's father was dying, he sent for his son and advised him as to his future course in the responsible position of chieftain. He told him above all to be industrious and sober himself, so that he would be beloved and respected by the white people. The father well knew the bad reputation of his son. As you read, notice how Little Crow failed in the position of trust.

By the time Minnesota was admitted to the Union, the Sioux Indians, who had once occupied nearly all of the state, had sold most of their lands to the whites and were supposed to live on their reservations on the upper Minnesota River. When you remember that for long years these savages had roamed the woods and plains wherever they wished, it is little wonder that the restraint of life on the reservations was very hard for them. They were still permitted to hunt in the regions to the north and west of the reservations, but hunting was not what it had once been, for the coming of civilization had driven away the game. Always lazy, the Indians depended on the food and clothing, as well as money, supplied by the government according to the terms of the treaties. They had much time in which to talk over their wrongs at the hands of the white man. To be sure, missionaries and

government agents lived among them, who tried to teach and to civilize them. Some of the Indians had become farmers and lived in houses like the whites, but many of the so-called "blanket Indians" were as wild as ever and greatly discontented with their lot.

Forts had been built to guard the Indian agencies and to insure safety, Fort Ripley up toward the Chippewa country in the north, Fort Ridgely on the Minnesota River near New Ulm, and a third fort in the extreme west on the Red River. This last fort protected the trade carried on by the Red River carts against bands of thieving Indians. These forts must not be thought of as anything like Fort Snelling, for they consisted of little more than a collection of wooden and stone buildings with no barricades.

The winter of 1861-62 was unusually severe. In the spring food was very scarce and the whole Sioux tribe, about 8,000 in all, eagerly awaited the government's yearly payment, which was generally made early in the summer. July came and still no payment. More than four thousand Indians, many of them hungry almost to the point of starvation, came at that time to the Yellow Medicine Agency on the upper Minnesota River. Here they went into camp to wait for their money and supplies. Yielding to the threats of the braves, the frightened agent gave out some food; and later a mob of angry Indians helped themselves to more. Finally he agreed to give them all he had if they would go home and stay until the government sent their money.

The traders not only refused to sell any more goods on credit, but also showed little sense in dealing with the Indians. They told the Indians that the Great Father had spent all his money for soldiers, and that was why the payment did not come. One trader said that if the Indians were hungry they could eat grass, which was certainly an inhuman way to talk to starving men. With most of her young men gone to war, the state was poorly prepared for defense. The Indians knew all this and knew also of the defeats which the President's soldiers had suffered, for the traders had told them. No doubt they thought it a good time to make an attack.

Finally Congress passed the bill to pay the Sioux. Seventy-one thousand dollars, all in gold coins and packed in kegs, reached St. Paul on August sixteenth. This was carried to Fort Ridgely by wagon, but by that time the terrible Sioux outbreak had begun. Some think that if the money had arrived a day sooner, this bloodiest of Indian massacres might never have occurred; others think that this would have made only a slight delay, for the savages were frantic with rage.

On Sunday, August seventeenth, a party of Sioux hunters stopped at a settler's cabin and without cause murdered five white people in cold blood. Returning to the reservations, a council was held late that night. If the murderers were turned over to justice, they would be hanged. Rather than to have this happen, the council decided to make war on the whites. The excited warriors rode madly to the home of Little Crow, the chief



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LITTLE CROW—THE SKETCH WAS MADE BY MAYER IN 1851 AT THE
TREATY OF TRAVERSE DES SIOUX. NOTICE THE
CALUMET IN HIS HAND

who had the greatest influence among the Sioux, arriving at daybreak.

Now Little Crow was the fifth chief of that name. It was a name which had been given by the French to this chief's ancestor because he wore on his shoulders the skin and feathers of a crow. Little Crow was somewhat in disgrace with his own people at the time because many of the Sioux thought that he had shared with the traders in their unfair dealings. He lived in a frame house and was known as a civilized Indian. Only three days before this the Indian agent had talked with him about the brick house which was to be built for him, and Little Crow had seemed much pleased. The day before he had attended worship in the mission chapel. Even, after the massacre, white men who knew him well still praised his good sense and kindness. He had been to Washington and knew the resources of the white man. For this reason he had always before counseled against war with the whites. To a savage of his intelligence it was evident that the government was having a hard struggle in the war with the South. Now, it seemed to him was the Indian's chance to drive out the white men and to fill them with such terror that they would never try to occupy this region again. At heart Little Crow was a heathen Indian. He was pleased to have the chance of getting into the good graces of his people once more. Also, he wished to show them that he was as brave in war as he was eloquent in council; so he consented to be their leader. "Let us kill the traders," he said, "and divide their goods."

By seven o'clock Little Crow, with probably two hundred followers all armed and painted, arrived at the Redwood Agency. Fire was opened on the whites, and then the killing and plundering began. One of the first to be killed was the trader whose cruel words had angered the Indians. When his body was found, his mouth had been stuffed full of grass. Small parties of warriors spread terror among the settlers of the Minnesota Valley. Peacefully working on their farms, often the first warning was the blood-curdling Indian war whoop. The men were mostly killed and the women and children taken captive. Later if these prisoners were a hindrance on the march, they were slaughtered. Houses were burned as well as the newly harvested grain.

It is said that a few Christian Indians had spoken for the whites at the council, only to be threatened with death if they failed to join their own people. John Other Day, a Christian Indian, with the help of a friendly half-breed collected sixty-two white people, who lived near the Yellow Medicine Agency, into a stone warehouse belonging to the government. After an anxious night this faithful Indian guided them to a place of safety.

The telegraph was unknown in this part of Minnesota, and this was before the days of the telephone. Those who escaped made every effort to warn their neighbors. Urged on by success, the Indians carried their deadly work through the entire southwestern part of the state.

As soon as the news of the massacre reached them, the settlers fled. Some of them carried their furniture and

what food they could get together quickly, in wagons. A great part of this region was deserted; and the harvest, all ready to gather, was left in the fields. Most of these people who left their homes sought refuge in the larger cities. Some of them went back to the places where they had formerly lived in other states, never to return. Although no one knows exactly, some say that eight hundred people were killed in thirty-six hours.

The Indians collected in large numbers for an attack on Fort Ridgely where many people from the country around had gathered for protection. Meanwhile Little Crow was carefully laying his plans. It is thought that he expected to capture Fort Ridgely and then to throw his forces against St. Paul and Minneapolis. By Wednesday, August 20, Little Crow had assembled a large enough number of warriors for the attack. Fort Ridgely was not



COURTESY OF MINNESOTA HISTORICAL SOCIETY

FORT RIDGELY

much like a fort. It consisted of several buildings facing in towards a parade ground. One of them was built of stone. The defenders numbered one hundred and eighty men. Besides these there were over three hundred women and children and wounded men. Fortunately there were six pieces of artillery in the fort with an able gunner in charge. Ravines leading down to the Minnesota River from the bluff on which the fort was situated, gave the Indians an easy approach. The cannon proved too much for the savages, however, and after three hours of fighting, Little Crow called off his men.

It was feared by all that the Indians would set fire to the dry roofs of the buildings at the fort with their fire arrows. Luckily at midnight after the battle the rain fell in torrents, and it continued raining all the next day. While the Indians were preparing for a stronger attack, the white people made good use of the time in strengthening their defense. The water in the fort had given out, and since the spring was far away, a well was dug. Men and women were employed in making cartridges; barricades of cord wood were built, and roofs were covered with earth.

On Friday, the Indians returned in greatly increased numbers. Little Crow had made up his mind that Fort Ridgely must be captured, and his warriors now made a desperate attack. Again the cannon made havoc among them; but the attack kept up until dark, when they left with yells of rage and disappointment. Indians seldom fight at night. The supply of ammunition in the fort had

run so low that steel rods were cut up into bullets. Shells were opened, and from their contents the women molded bullets. Little Crow did not again try to capture Fort Ridgely, but for some days his men guarded the neighborhood to prevent the escape of the garrison.

New Ulm, which had withstood one assault, was attacked for the second time. A strong force of Indians advanced on the town from all sides. Under the able leadership of Captain Charles Flandrau (later known as Judge Flandrau), the town had been fortified. The savages were again repulsed, discouraged by the fire from the barricade. A monument in the center of New Ulm now honors the fearless leader who, with a small band of untrained but brave men, saved the town.

It was not until the afternoon of Tuesday, August 19, that Governor Ramsey received the news of the Indian outbreak. No one was better fitted to command a force against the Indians than Mr. Henry H. Sibley. He knew many of the Indian leaders, could talk the Sioux language, and was familiar with the region where the seat of the trouble lay. The governor at once drove to Mendota where Sibley still lived and persuaded him to take the command. The next morning Sibley, who had received the commission of a colonel, started up the Minnesota River by steamboat with four companies not yet mustered into the United States service. Leaving the boat that night, he marched first to St. Peter. When Sibley found that he was opposed by a force of perhaps 1,500 warriors, many of them mounted and well armed,

he knew that his 400 raw recruits furnished with discarded rifles from Fort Snelling would be no match for them. He wisely delayed until reinforcements and supplies could reach him. Governor Ramsey acted promptly in response to his request, and in a few days Colonel Sibley had a force of 1,400 men.

In spite of this number these troops were as yet almost useless. Much of their ammunition did not fit their guns and had to be made over. The horses of the mounted men, as well as the men themselves, were raw and untrained. This little army was the best the country could furnish just at this time, but it was probably about as poorly equipped as any army that ever entered the field. Not only this, but these raw troops were to face warriors, many of whom were famous fighters. The white soldiers were intelligent and eager to learn, and under their able commander they soon overcame many of their handicaps.

On August twenty-seventh Colonel Sibley entered Fort Ridgely to the joy and relief of the long imprisoned garrison. At the earnest request of the people who had sought refuge at the fort, a party of troops was sent out to bury the dead and to act as scouts. These troops were surprised by the Indians and met heavy losses before reinforcements reached them.

Colonel Sibley was now confronted by a difficult problem. If he forced a fight with the Indians, they would doubtless kill the three hundred prisoners whom they were holding. Nevertheless the newspapers criticised

him for his delay in pursuing Little Crow. At this stage there was an exchange of notes between Colonel Sibley and Little Crow. The latter made an effort to arrange terms by which he and his friends would escape punishment for their bloody deeds. Sibley, however, refused to talk with him unless the prisoners were first returned.

About the middle of September Colonel Sibley, whose men were now much better prepared, marched against the Indians. A fierce battle was fought at Wood Lake. It has since been found out that Little Crow had chosen ten of his best men to kill Colonel Sibley at any cost, and that this special band had been scattered by shells falling among them, aimed by the Colonel's own hand. After two hours of fighting Little Crow and his men retreated. Bitterly disappointed that he had failed not only in getting control of the Minnesota Valley as he had planned but also in not being able to hold his chiefs together, he moved rapidly toward the Northwest, taking his family and the Indians who still stood by him. In a few days prisoners to the number of two hundred sixty-nine, both white and of mixed blood, were turned over to Colonel Sibley. The treatment which some of these had received was too terrible to describe.

Shortly after the battle of Wood Lake President Lincoln appointed Colonel Sibley a brigadier-general.

In a few days nearly two thousand Indians, largely women and children, were taken prisoners. Three hundred and seven Indians were sentenced to death. After an investigation President Lincoln pardoned all but



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CAPTURED SIOUX INDIANS IN CAMP AT FORT SNELLING—1862-63



COURTESY OF MINNESOTA HISTORICAL SOCIETY

CONFIRMATION OF SIOUX INDIANS BY BISHOP WHIPPLE—
FORT SNELLING, 1863

thirty-eight who were hanged at Mankato in December.

On the morning of the execution the condemned men broke into a weird death song. Led by their chief, all the others joined and kept time by rattling the chains on their arms. They then decorated themselves with paint and feathers which their friends had brought. The good priest, Father Ravoux from St. Paul, said a prayer in which the Indians united, speaking the words softly. Again on the scaffold they sang the death song and died singing. This was their way of showing how Indian braves should die, with no sign of fear.

The prisoners who were not condemned to death were marched to Fort Snelling, where they were kept in a guarded camp until the next May.

When Congress met in December, 1862, all treaties with the Sioux were put aside, all their lands were forfeited, and the money which would have been paid them was partly used for the relief of the people of Minnesota. The cost of the Indian campaign was made up to the state. With very few exceptions the Sioux were removed from Minnesota to reservations in South Dakota, and later they were taken to Nebraska.

The next summer Little Crow and his followers renewed their attacks on the western frontier of the state with no great success. On July 3, 1863, while picking berries near Hutchinson, Minnesota, Little Crow was fatally shot by a white man.

Both of Little Crow's wrists were badly deformed, and it was by this deformity that the Indian who was killed

was recognized as the once proud chieftain. When fighting to gain the place of chieftain as a young man, Little Crow had been so severely wounded in the wrists, that the doctor at Fort Snelling thought that it would be necessary to amputate his hands to save his life. However, his own people nursed him carefully, and after many weeks he recovered, but his wrists were always very badly deformed.

It is impossible to tell just how many lives were lost in the Sioux uprising. The smallest estimate is over six hundred. Certainly in no other single Indian outbreak in the history of the United States were so many white people killed.

All the Indians who now live on reservations in Minnesota are Chippewas. Not until the Sioux were removed from the state, did the almost continuous war between the two nations cease.

Horrible as the Sioux War was, it was the natural result of the treatment which the Indians had received from the white man. In 1850 Mr. Sibley tried to secure the passage of a bill for the protection of the Indians by law. Speaking eloquently in their behalf, he told his fellow Congressmen at Washington that the government should provide homes for the Indians and should establish schools, particularly schools where useful trades were taught. He spoke against the repeated breaking of treaties by the government and the making of promises which could not possibly be kept. He urged that something be done at once, or before many years the white people

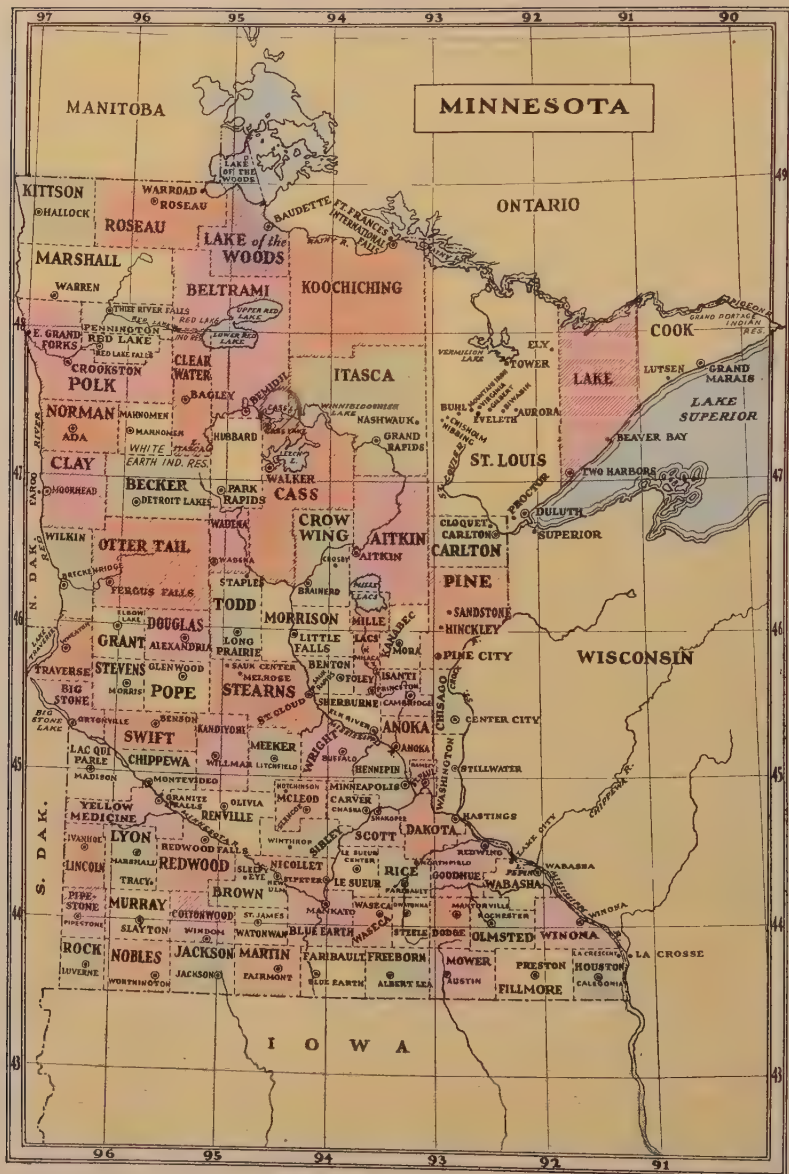
would suffer from a bloody Indian war. His words had no effect, and just what he had foretold came to pass in the great Sioux uprising of 1862. It was the terrible revenge of years of stored-up anger.

Many people condemn the Indians. Can you see points in their favor which show that much injustice was done them? A visit to a school such as one finds on the Red Lake Indian Reservation makes one rejoice that our government is now trying to fulfil in a measure its duty to the red man.



COURTESY OF MINNESOTA HISTORICAL SOCIETY

FIRST BLOODSHED IN THE SIOUX UPRISING



CHAPTER XIII

MINNESOTA IN THE MAKING

In the first twelve chapters of our book we have learned much of the history of our state. Now we shall study the state from a different angle and shall learn of the geography of Minnesota, in the formation of which volcanic fires and glacial ice have both done their part.

Minnesota is a remarkable state, and we may well be proud to claim it as our own. It is one of the larger states; only ten outrank it in size. In its area of 84,682 square miles there are 3,824 square miles of water surface. This vast water area gives our state an advantage over every other in the Union, for our ten thousand lakes are known almost all over the world. Besides this over 2,500 square miles of Lake Superior lie within the political boundaries of Minnesota. Our state is larger than the six New England states with New Jersey and Maryland added to them. It is almost one third as large as Texas, the largest state, and nearly seventy times the size of little Rhode Island. The state of Idaho comes the nearest to the size of Minnesota.

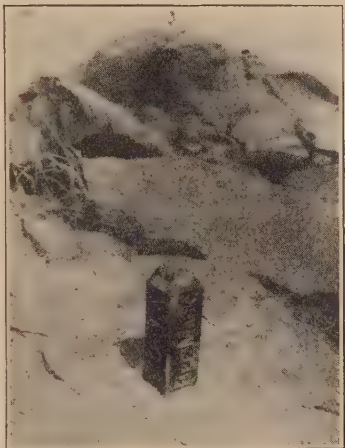
Like all states we have a nickname. Minnesota is known as the Gopher State, which needs no explanation as all know the little animal of this name.

Nearly two and a half million people live within our borders. If Minnesota were as densely populated as some of the countries of Europe, it would hold half the people of the United States.

To travel from north to south at its greatest length, one must go 408 miles, and the trip from east to west at the greatest width covers 357 miles. Another way to measure these distances is to take the latitude and longitude from the map. Pigeon Point, the most eastern point in Minnesota, is 89 degrees 34 minutes west longitude, and the western side is 97 degrees 12 minutes west longitude. Every fifteen degrees of longitude means an hour's difference in time. There is a difference between these two of nearly eight degrees, so the people who live in the extreme eastern part of the state see the sun rise one half an hour earlier in the morning than the people who live in the west. As to latitude the state lies between 43 degrees 30 minutes and 49 degrees 23 minutes, north latitude. St. Paul, with a latitude of 45 degrees, is just halfway between the North Pole and the equator. Minnesota lies in the exact center of North America, halfway between the Atlantic and Pacific and also halfway between the Arctic Ocean and the Gulf of Mexico.

No doubt you have noticed that at one place on the map the northern boundary of Minnesota extends into Canada like a chimney on a house. This most northern part of the United States excepting Alaska is called the Northwest Angle or "the Chimney." It has been the

disputed point in more treaties than any other part of the boundary of the United States. After the Revolution the line was set by treaty through the Lake of the Woods to the northwest corner of the lake, then due *west* to the *Mississippi River*. This shows the ignorance of the statesmen of that time in regard to the geography of this region. Within a few years both England and the United States felt certain that it would be impossible to draw the boundary according to the treaty. After the War of 1812 commissioners from both countries worked over the problem, but the line was still indefinite. In 1842 the question came up again and was settled for the time by the Webster-Ashburton Treaty. Daniel Webster was then Secretary of State and Lord Ashburton came from England. However, the ownership of many islands in the lakes and rivers on our northern boundary was not decided, and the boundary was far from sure. President Grant appointed commissioners to survey and mark the line. They worked with Canadian engineers, and the international boundary was corrected and marked from the Lake of the Woods to the Rocky Mountains. Iron pillars were erected well over on



COURTESY OF D. LANGE

REFERENCE MARK, INTERNATIONAL
BOUNDARY NEAR
GUN FLINT LAKE

the boundary of North Dakota, and the rest of the line was marked by stones and mounds of earth. Most of the line follows the forty-ninth parallel, although Minnesota at the point of dispute extends almost twenty-three miles north of this parallel. On May 29, 1876, this agreement was signed at Washington by the representatives of both governments.

Some surveyors think that the present boundary is still incorrect, but it is not likely that it will be changed again. The Northwest Angle contains about 150 square miles of land, much of which is a swamp. It is of little value, although in time it may become a great summer resort. The state has done her duty by this region in establishing schools here.

Minnesota is very old, as old as any part of North America. No trace of its great volcanoes can now be found, yet from the rocks, which clearly were made by volcanic action, we know that they once existed. The volcanoes seem to have centered around St. Cloud because the rocks here show the result of the great heat which fused and formed them. Our one-time high and grand mountains have been worn down into sand, which now forms the great beds of sandstone underlying many parts of the state. The average altitude of Minnesota, or height measured above the level of the sea, is almost exactly 1,200 feet. This is not so high as the Dakotas, but is higher than Wisconsin, Michigan, or Iowa. In the northeastern corner of Minnesota are both the highest and the lowest parts. The lowest land is on the shore

at the head of Lake Superior, only 602 feet above sea level; less than fifty miles away a granite peak of the Misquah Hills, 2,230 feet above the sea, is the highest place.

Close to the north shore of Lake Superior are the Sawteeth Mountains forming the only mountain range in the state. The crests stand out against the sky like the teeth of a saw. One or two peaks separated from the range are well-known landmarks to the old sailors of Lake Superior. Farther inland, beyond the Sawteeth Mountains stand the great rounded tops of the Misquah Hills.

Minnesota is a great rolling plain. It was once the home of glaciers, and these have had much to do with shaping its surface. During the Glacial Period or Ice Age, as it is called, this region must have been much higher above sea level than now. This greater altitude made the climate much colder. More snow fell in the course of a year than could melt, and after a few centuries this snow piled up until it became very heavy and deep. Its own weight and the melting during the warmer seasons turned the snow into ice: much as a snowball pressed in a boy's hands becomes solid and icy. The great weight of the ice pressing heavily on the ground caused it to move slowly, plowing its way over anything in its path. How thick it was, nobody knows, but it must have been thousands of feet. The fragments of rock picked up by the glacier gave it great cutting power. The old rocks of Minnesota have been ground down in places probably hundreds of feet.

Glaciers in the Alps in Switzerland had been studied by European geologists (men who make a study of rocks) long before it was known that ice sheets had once spread over nearly all of the northern half of North America. About 1850 Louis Agassiz (ăg'a-see) came to the United States from Switzerland. He noticed that the rocks and hills bore the same signs of glacial work which he had seen in the Alps. When he first said that he believed glaciers had once covered many parts of our country, scientists did not believe him.

Now, however, many men who have made a study of glaciers in Alaska, Greenland, and Switzerland find absolute proof that the ice once crept down from the north and spread over most of Minnesota. Nowhere are the proofs of glacial work plainer than in Minnesota. In those places where glaciers are now found, deposits of sand and clay are being formed at the present time, like those which cover a large part of our state. These experts tell us that such deposits can be formed in no other way except by glacial action. Sand found in many localities is used in cement making, and scarcely one of all Minnesota's eighty-seven counties lacks deposits of clay which can be used in manufacturing brick. Particularly since the cutting away of our forests, these building materials have proved most useful.

At the foot of the Alpine glaciers, the rocks are found to be marked with deep scratches or sometimes polished and smoothed just as many of our rocks are.

The thick field of ice moved forward, plowing its way

over everything in its path. Hills and mountains were rounded off, and loose rocks and earth were mixed with the ice and carried along. When the glacier melted, all this load of earthy material was left on the land. This material is called glacial drift, or it is often spoken of as rock waste. Glacial drift is very abundant in Minnesota; the average thickness for the whole state is about one hundred feet. In places it is spread out in level sheets for miles and miles, while in other places it is piled up to form hills.

For some reason this great sheet of moving ice failed to cover a small part of southeastern Minnesota. Here a valley lying between hills over which the glacier traveled stood out like an island in the midst of the mighty sea of ice. This is known as the Driftless Area and includes some three thousand square miles. The surface and soil of this region are very different from those of the rest of Minnesota. The sharp edges of the pebbles have not been rounded off, nor are there any boulders to get in the way of the farmer's plow.

No one can tell how many times ice invaded our state. Toward the end of the Ice Age of Minnesota there were three glaciers which advanced into the state from three different directions, all at about the same time. One of these, hundreds of miles wide, moved southwest from the region of Lake Superior. The drift left by this glacier is red in color, due to the decayed volcanic rock from the Lake Superior basin. At Duluth all the clay and sand are red. Near Taylors Falls, Minneapolis, and

St. Paul, this same red drift may be seen. Traces of it extend into the central part of the state and near to Wabasha on the south. A second glacier seemed to have centered at Rainy Lake. This picked up boulders of granite and other rocks, depositing them near Lake



COURTESY OF D. LANGE

A "FOREIGNER"—THIS BOULDER
WAS DROPPED HERE BY
A GLACIER

Itasca. When loose rocks are found far from any bed of that same kind of rock, one may know that they were brought from their original beds by glaciers. Such boulders are spoken of as "foreigners"—a very appropriate name. The third great ice

stream came into the state by way of the Red River Valley, advanced southward down the valley of the Minnesota River, and on into southern Iowa, leaving a cover of gray drift, rich in lime.

These three great glaciers finally melted at their southern edges. Sometimes as they retreated northward they would gather strength and again and again advance to the south. When the ice moved gradually northward, layers of drift covered the ground, but when the melting edge remained long in one place, moraines or long ridges of rock waste were pushed together and left. In many parts of the state all the hills we see are morainic hills. Sometimes these moraines are short and sometimes many miles in length. The last glacier mentioned formed on

its western side the double ridge of the Coteau des Prairies in southwestern Minnesota. These hills are so high that Jonathan Carver called them the Shining Mountains.

The Leaf Hills in west central Minnesota are also morainic, having peaks which rise to 1,800 feet above sea level. The Misquah Hills are very different, for these were formed by volcanoes and consist of almost naked volcanic rock.

Near the State Agricultural College in St. Paul a much smaller moraine may be seen. In fact almost every portion of the state has its moraines. One may go to Alaska or Switzerland and see a small moraine in the slow process of formation at the present time.

If we had lived in southern or western Minnesota at the time the glaciers were melting, we would have seen enormous lakes along their edges. These have since disappeared. The greatest of all was Lake Agassiz named for that great Swiss scholar, who first unfolded the history of our glaciers. Once this lake entirely covered the Red River Valley. You will read of this in another chapter.

Every one of you knows about Minnesota's ten thousand lakes. No other state in the Union has so many. Of every possible shape and size, some of them are hardly more than drinking pools for cattle, while others extend for miles and miles. Red Lake with 440 square miles is the largest lake not only of Minnesota, but is the largest fresh water lake within the borders of any state. It is a shallow lake made up of two parts connected



COURTESY OF DR. F. J. ALWAY, UNIVERSITY OF MINNESOTA

MORAINIC LAKE

by a narrow channel. Other large lakes are Mille Lacs, Winnibigoshish, Leech, and Vermilion.

Lakes are not equally numerous in all parts of the state. A map shows very few in the southeastern part or in the Red River Valley. Of course this is because the whole valley was once filled by a lake. It is well known that glaciers caused by far the greater number of our lakes. The glacial lakes are of two kinds. Most of them are formed in the hollow places in the glacial drift, which was unevenly spread over the land. These are morainic lakes. Water flowed down from the higher land nearby and collected in these places. After a while the fine material or silt, which they brought, covered the bottom and sides of the depressions, making them watertight. Such lakes are generally very irregular in shape,

and the winding shores bordered with rolling hills add much to their beauty. Minnetonka is a beautiful lake of this type.

The other kind of glacial lakes are the bed rock or rock-bottomed lakes, found where the drift is so thin that the lakes rest upon the bed rock. By wearing out the softer parts of the rock, the ice and ancient streams made basins. Lake of the Woods and Rainy Lake on our northern boundary are wonderful examples of this kind. Hundreds of islands made of the harder rocks add to the charm of these lakes. Over thirteen thousand islands have been charted in the Lake of the Woods, some mere dots and others of considerable size. These islands are masses of hard rock which resisted the glacier. In the northeast corner of Minnesota are many lakes of the same shape, all long and narrow. They lie in rifts or cracks in the rocky surface. These are rock-walled lakes, also, but of a somewhat different kind. There are a few lakes not caused by glaciers, like Lake Pepin. Later on we shall find out how this lake was caused.

Minnesota is fortunate in having the sources of three great river systems. A complete waterway leads to Hudson Bay on the north by way of the Nelson River system, of which the rivers and lakes in the northwestern part of our state are a part, including the Red River of the North and Lake of the Woods. On the east another waterway leads to the Atlantic Ocean by the Great Lakes and the St. Lawrence. The St. Louis River and other streams flowing into Lake Superior belong to the St. Lawrence



ROCKY ISLAND IN ROCK-BOTTOMED LAKE ON NORTHERN BOUNDARY—
THOUSANDS OF SUCH ISLANDS ARE FOUND IN THE
LAKE OF THE WOODS

system. Most important of all is the waterway leading south to the Gulf of Mexico—the great Mississippi, which drains more than one half of the state.

All the drainage of the state finally runs into one of these three great river systems. Few states can be approached by water from so many different directions as can Minnesota. Before the coming of the white man, the Indians traveled from stream to stream, making portages from one waterway to another. Had it not been for its rivers, particularly the Mississippi and its

branches, it is more than likely that much of Minnesota would not have been settled until a much later date. It is certain that the great waterways connecting it with the more densely settled regions of the south and east made the development of the state much more rapid. Duluth, one of our earliest explorers, came by the St. Lawrence system; Hennepin came by the Mississippi. Most of the early settlers entered by way of the Mississippi. What would the lumbermen have done without the streams on which to float their logs from the pineries to the mills?

It is hard to separate these three great drainage systems on a map because the divides that part the waters



COURTESY OF MINNESOTA HISTORICAL SOCIETY

LOGGING ON THE RUM RIVER, 1864

are not mountains at all. The region north of the source of the Mississippi is only of medium height. Since it is not nearly so high as the land in the northeast corner of Minnesota, the name, "Height of Land," is not appropriate. This name leads one to think that here is the greatest elevation in the state. Although the name is still found, it is no longer used. This land, even if not very high, divides the central plain of North America in such a way as to give the direction to its great rivers.

Towns were founded on the streams as the people had to travel by water before railroads or even roads were built. Later the numerous waterfalls were put to work to run mills. Most of the waterfalls of the state would not exist if glaciers had not interfered with the courses of the rivers. When their beds were choked by glacial drift, the rivers were often forced to find new channels.

Of course one would not expect Minnesota to have so much waterpower as states like Washington and California, where slopes are much steeper and rainfall much heavier. Nevertheless Minnesota has considerable. The many lakes and swamps give the rivers a steady flow of water power. Floods are unusual; so dams need not be so heavy as where streams have great floods. A large amount of power is developed from St. Anthony Falls at Minneapolis. Some other important waterfalls which have already been harnessed are in the St. Louis River near Duluth, in the Red River of the North at Fergus Falls, in the upper Mississippi River, in the St. Croix River, and in the Rainy River on our northern boundary.



COURTESY OF LITTLE FALLS BOARD OF COMMERCE INC.

POWER DAM ON THE UPPER MISSISSIPPI AT LITTLE FALLS

The Government High Dam on the Mississippi at St. Paul also furnishes much power.

Because we are far from coal mines, the price of coal is high, and since manufacturing is constantly increasing, our waterpower is being developed rapidly. It is thought that at some time the Minnesota streams will furnish about half a million horsepower.

The term, horsepower, is used so commonly that hardly anyone thinks what it means. The first steam engines used did the work which horses had previously done. Therefore it was natural to measure the power of the engines by the number of horses which could do the same amount of work. This led to many experiments to find out how much power one horse had. Finally the

results gained from experimenting with heavy London dry-horses were adopted. In getting these results weights were raised by means of ropes led over pulleys. The power of one horse, or "one horsepower" as it is called, was found to be the force necessary to lift 33,000 pounds, through a distance of one foot, in one minute. This is used as a measure for force derived from water or steam.

Although Minnesota has no coal, in time to come her vast peat bogs covering about one fifth of the state may be a great source of fuel. Peat almost exactly like this is used commercially in several European countries. Think of it, there is one peat bog in the northern part of the state with nearly one thousand square miles of peat at least seven feet thick. Beds have been found twenty and even forty feet in thickness. Not only in northern Minnesota, but in other parts of the state as well, peat is found.

Again the glacier is to be thanked for this gift; for only where glaciers have been, is peat found. In time it will prove to be very valuable. When Lake Agassiz was drying up, small shallow lakes were left in the hollows in its great flat bed. Here plants grew in abundance, no doubt like those which we now find on low marshy land. During the wet seasons the land around these shallow lakes was flooded, and the region was kept very wet because the moisture could not drain off from the flat land. The peat forming plants grew rapidly; and when they died, the moisture prevented any decay.



COURTESY OF DR. F. J. ALWAY, UNIVERSITY OF MINNESOTA

DRAINING A MUSKEG SWAMP IN ROSEAU COUNTY

Other plants kept collecting, and in this way large peat beds were rapidly formed and are still forming. These northern swamps are called "muskegs." Many of the peat bogs did not start in filled lakes, but were built up on moist low ground. Probably some of the peat will be used to produce gas for power, and some of it will be prepared in blocks to be used as fuel in homes. In Europe many other uses have been found for it, and peat land, when drained, is excellent for farming.

The chief building stones found in Minnesota are granite, limestone, and sandstone. The important granite quarries are along the upper Minnesota River Valley, particularly at Ortonville where a dark red kind is found, and around St. Cloud where more of this stone is quarried than anywhere else in the state. In few parts of

the world have volcanoes been more active than those of Minnesota, when this rock was being formed. Melted rock deep beneath the surface gradually cooled and crystallized into granite. We call it solid rock, but wherever there are crystals there is still water in the rock. Geologists tell us that there is just about one gallon of water in two hundred and fifty cubic feet of this stone. If the cooling took place very slowly, deep down in the earth, the crystals were much larger than when the rock cooled rapidly. It is interesting to think of this when one sees this beautiful building stone. Although our granites are very, very old, they are still fresh and in excellent condition for the use of man. If it had not been for the glacier's removing a great depth of rock and earthy material from the granite, we might never have known anything about it; or if we had, the stripping of the quarries would have made the stone too expensive to use. Gray, red, and pink granite are all found in St. Cloud. The foundation of our Capitol in St. Paul is made of the gray granite; inside the building are enormous granite pillars, some from St. Cloud and some from Ortonville.

The first stone quarried in Minnesota was the limestone which, you remember, was used in the building of Fort Snelling and also in the old Sibley house at Mendota. The chief quarries of this stone are in the southeastern part of the state along the Mississippi and extending westward. It is found extensively around Mankato and in the southern part of the state. This rock tells us of the time when Minnesota lay beneath the sea. The

skeletons and shells of countless numbers of creatures which lived in the sea, together with tiny plants, sank to the ocean bottom and made limestone. In this stone the fossils of these animals are often seen. Some limestone is used for building, while a great deal is crushed and used for roads or is made into lime.

Another valuable building material is sandstone, the best being found not far from Duluth. On the Kettle River, at the town of Sandstone, is a large quarry where the light pink stone is found. This is much used for building purposes as well as for paving, and it is sometimes shipped to other states. Sand is made up of particles of very hard rock, ground from the ancient mountains of our state. Much of it was later hardened into beds of sandstone. Some sandstone which cannot be quarried is so porous that each cubic yard contains gallons of water. In many places this water is being used more and more. In the city of St. Paul, the water supply is greatly increased by the artesian wells which have been drilled into the underlying beds of sandstone.

In southwestern Minnesota is found a rock called quartzite, also formed of fine grains of sand. This is among the hardest and most durable rocks known. Its beautiful red color is caused by the iron in it. In Pipestone County, where it is found, it is much used as a building stone; but paving blocks are also made of it, and in crushed form it is used for road making. The people of that part of the state call it jasper.

Minnesota has long been known as a farming state,

which means of course that her soils and climate are suitable for various crops. Thanks to the glacier, our state has much fertile soil. The ice ground the rocks; when it melted, the flowing water sorted these soil materials, separating the finer from the coarser, and spread them out ready for the use of man. Almost every kind of rock known enters into Minnesota's soils. The glacier mingled these as nothing else could have done, blending together all the different kinds. These are mixed with decayed animal and vegetable matter (called humus) which has been collecting for ages. The skillful farmer knows when his crop has exhausted some particular kind of plant food from the soil. By changing to another crop, other plant foods are drawn upon, and the soil has a chance to renew what has been taken from it.

In the southern and southwestern portions of the state we find the prairies. Pioneers were unwilling to move into these regions. They preferred turning the forests into farm land, in spite of the great labor involved, for many were afraid of wind storms and the awful prairie fires. Then there were no trees for fuel except a few along the rivers. Many supposed the prairie soil was so poor that trees could not grow. On the contrary the soil there is rich and easy to work. It is rich black loam, free from stones; loam is a soil midway between cold, heavy clay and loose, light sand. Finally the cheap land led people to find the great possibilities and advantages of these grassy plains, and those who settled there were well repaid for doing so.

The Red River Valley soil, which contains more clay, is ideal for wheat.

In some parts of the country the soil was removed by the glacier. Here the ground is barren and strewn with rocks. In Minnesota quite the opposite took place, for soil was scraped from Canada and deposited here.

The driftless region in the southeast corner of Minnesota has a very productive soil called loess, which was probably brought here by the wind in the form of fine dust. It is light yellow in color and of great depth, very much like the enormous loess deposits which form the fertile lands of China.

In early times it was quite generally believed that few crops would ripen in Minnesota on account of the short growing season. The length of the growing season is measured from the last killing frost in the spring, to the first killing frost in the fall. Naturally Minnesota's growing season is shorter than that of more southern states. The longer summer days with added hours of sunshine make it equal, however, to a longer growing season, where the days are shorter. In fact plants get as much light in two and a half months here as they do in four months farther south because of our long days; our longest day is about sixteen hours in length.

In such a large state the rainfall varies. The northeast quarter has an average of thirty inches; the southeast quarter has almost the same. The southwestern part has a somewhat smaller amount, and the northwestern corner is the driest part of the state, having about twenty

inches. Perhaps you have heard twenty inches of rainfall called the "Dead Line in Agriculture." With less than this amount ordinary farming cannot be carried on. Minnesota is seldom troubled by droughts, for over the entire state the rainy season comes during the summer. Three fourths of our rainfall comes during the growing season, and in every part June is the rainiest month.

It is amusing to read that in very early times in Minnesota, people thought that it would be foolish to try to have railroads, for at best they could run only about six months in the year, on account of the heavy snows. Although the snowfall in Minnesota is not unusually heavy, the snow often freezes on the ground. Generally the snow melts slowly, and so by midwinter several feet may have piled up. This makes a warm covering for the soils, and in spring great benefit is derived from the melting snow.

The state lies in the "prevailing westerly" wind belt, but the winds are very variable, that is they often change direction. A northwest wind is most common in Minnesota, coming from that direction more than half of the year. A southwest wind is the next most frequent.

Far removed from the ocean, Minnesota has what is called a continental climate, which is known for its sudden changes. However, an immense body of water like Lake Superior tempers the climate of the bordering region to quite an extent, making the summers cooler and the winters milder. Best of all, the climate of Minnesota is remarkably healthful. The lack of dampness makes one feel the extremes of heat and cold less. The pure, bracing

air tends to make her people active and makes Minnesota desirable as a summer resort.

The fertile soils combined with sufficient moisture and long days of warm sunshine have done their part in placing Minnesota among the first ten farming states in the country. Altogether nature has been generous with Minnesota, more so perhaps than with any other state in the Union. Her lakes and streams, hills and valleys, forests and prairies, give a pleasing variety seldom found within the boundaries of one state.

Locate on the map the many names mentioned in this chapter. Learn the names and locations of the five largest lakes in the interior of Minnesota and also of five lakes on the border. Bring in specimens of Minnesota's three chief building stones. Test them for hardness. Tell the uses for each.



STRIPED GOPHER FROM WHICH COMES MINNESOTA'S NICKNAME, THE "GOPHER STATE"

CHAPTER XIV

THE PLAYGROUND OF THE NATION

Read to find out how Minnesota ranks among other states in number of visiting tourists.

In reading Minnesota history we realize how nature's gifts, one after another, have attracted people and brought wealth to our state. First the rich furs of Minnesota furnished the demands of the world of fashion. In territorial days lumber was the cause of a great many people coming here. Next the wheat fields increased our population and began that lasting prosperity which must be based on the soil. The iron mines added people and wealth, and the dairy farms have proved an inexhaustible treasure. But not yet had the list of resources run out.

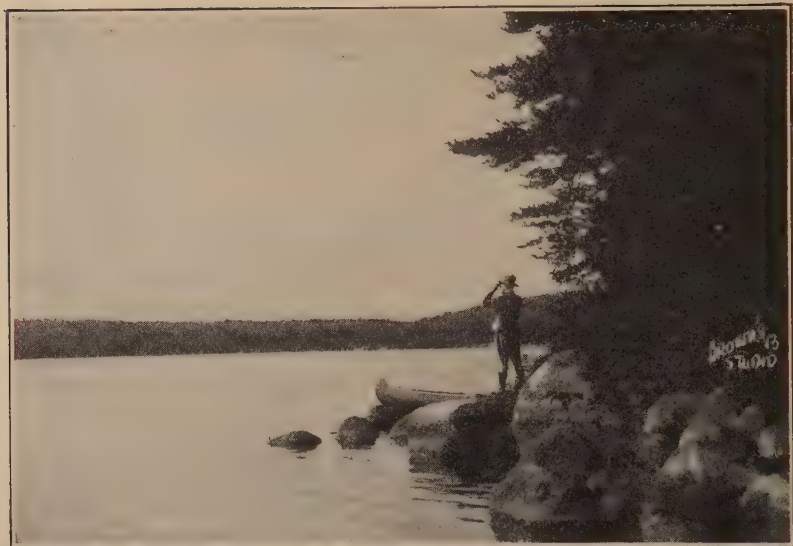
In 1917 a group of business men met in St. Paul and formed the Ten Thousand Lakes of Minnesota Association. "We'll sell Minnesota's Ten Thousand Lakes," they said, and with this end in view they decided to advertise Minnesota's lakes. At first the advertising was carried on particularly in the South. Their slogan, "Come to Minnesota—Ten Thousand Lakes are waiting for you," was hard to resist. Somehow the breath of the pine woods

with the coolness of lake breezes, and the lure of fish waiting for a fisherman were woven into the invitation which was broadcast over the country.

The results of this advertising campaign, which has been vigorously kept up, have been almost world-wide. In one season visitors from every state in the Union have been registered. Inquiries about vacation resorts frequently come from South America and from Europe and have been received from such remote places as Egypt and the Dutch East Indies. One day's mail brought letters seeking information on Minnesota's lakes from Cuba, Holland, and Spain.

The founders of the association never dreamed of such a response as has already been made. Think of nearly a million and a half tourists spending eighty-two million dollars in Minnesota in one year! Most of these visitors come in autos, and a daily average of twenty-five thousand cars from other states has been checked up by the Minnesota Highways Department. Today Minnesota ranks as the third state in number of visiting tourists. Only the winter resort states of California and Florida are more popular.

At present the "tourist crop" brings in more money than any single crop with the exception of corn. Great possibilities are still ahead, and the people of Minnesota will not be satisfied until their state leads all others in this line. With such a variety of attractions to draw them, there is every reason to believe that tourists will continue to increase in numbers for years to come; and that



COURTESY OF TEN THOUSAND LAKES OF MINNESOTA ASSOCIATION

THE LAKES ON OUR NORTHERN BOUNDARY ARE IDEAL VACATION SPOTS

“Selling Minnesota,” as the tourist trade is called, will continue to be a paying business.

If we could spend our vacation at any one of the ten thousand lakes, we should certainly find it hard to choose. Those of us who love the wilderness will decide on the lakes and streams on the northern boundary. This is the greatest canoe country in the world, we are told. For hundreds of miles we can paddle our canoe, now and then making an easy portage. We may not see any houses, and perhaps not any human beings, for days at a time. Fish fried over the campfire could not taste better, and



DEER IN WOODS ON NORTHERN BOUNDARY

wild berries add to our fare. Sometimes at night we may hear the howl of a wolf, but the cool breezes and the soothing sounds of the woods and water soon lull us to sleep. Every day has new joys in store. Here is a mother partridge with her chicks, a beaver slipping into the water surprised by the sudden approach of our canoe, or a little spotted fawn, at first unnoticed in the flickering sunshine and shadows. The Superior National Forest, through which we pass in getting to the lakes on the boundary, is full of wild creatures. They seem to realize their safety, for here not only the grand old trees, but the animals that find their homes among them, are also protected. In the year 1909 this forest was made a permanent timber and game reserve by that great lover of nature, President Theodore Roosevelt. Roads penetrate the forest, but otherwise the vast area has been untouched by man.

Perhaps some of us do not care for so long a trip. The vast stretches of Lake Vermilion are most inviting, and we may spend our vacation near the city of Tower. We enjoy the sunshine and are told that Tower for some years has held the record of being the sunniest spot in Minnesota. A launch will take us to any point on the lake, or we can hire a real Indian guide to take us in his boat. The fish are fine, too, for all Minnesota's lakes abound in the best varieties and are kept well stocked from the state fish hatcheries. Once a mining town, Tower is becoming an ideal summer resort.

Others, who love to follow a woodsy trail, will enjoy a week or two at Lake Itasca. A new exploring trip may

be planned for every day. It is well to take a compass along; for unless we are wise in woodcraft, it is very easy to get lost.

If we wish to plan a journey so that we shall see the greatest number of lakes in the state, we shall start at Taylors Falls on the east and go southwest to Minnetonka, passing the Chisago Lakes, White Bear, and many others on the way. Then we shall turn to the northwest. Crossing Kandiyohi, Pope, and Douglas counties, we go on to Fergus Falls in Otter Tail County, the heart of the Leaf Hills. Hundreds of lakes have been passed, for these last named counties lie in the famous Lake Park Region. Changing our course for the northeast, we make our way past the headwaters of the Mississippi, on to Lake Vermilion, and the international boundary. Nowhere else in the world could we see such a beautiful variety of lakes and streams.

Everyone should see the Lake Park Region for this is the most noted lake country in the state of Minnesota, if not in the whole United States. Our autos are ready, maps have been studied beforehand, and we are all starting for the Lake Park Region. From every corner of the state no matter where we live, we can follow good roads. If we come from the southern part of the state, many cars pass us from Iowa, Illinois, and Missouri. Like us these people are bound for the Lake Park Region, glad to escape the uncomfortable heat of their own states.

The roads wind around the lakes and over hills, under grand old trees of many kinds. The great sugar maples

are still green in July, but in another month or so, their red gold leaves will color the landscape.

Now we are in Pope County, and we stop at Glenwood on Lake Minnewaska. Its clear, deep waters are sky blue. Perhaps we have never heard of this lake before, about which some one has said, "Maybe there is a prettier lake in Minnesota or the West, but I never expect to see it." We pass a fisherman who is proudly displaying a big wall-eyed pike. On the shores of this lake is located the most completely equipped fish hatchery of the state.

Douglas County alone has two hundred lakes. We know that these are morainic lakes from the rolling hills that line their shores.

The Lake Park Region does something else besides taking care of visitors. As we see fine herds of dairy cattle grazing, we are not surprised to hear of the large creameries which have been established here. At Osakis is a farm run by the State Agricultural College, therefore we know that farmers in this part of the state believe in scientific methods. We are told that Douglas County used to raise on its fertile soil some of the largest crops of wheat of any county in the state, but farming methods have gradually changed. Corn has increased and more and more attention has been given to dairying. This experimental farm has produced varieties of corn which ripen early and are so well adapted to this county that corn is grown very successfully.

Alexandria, also in Douglas County, is famous as a fishing resort. It is sometimes called the home of the



PHOTO BY KENNETH M. WRIGHT

BEAUTIFUL LAKE OSAKIS IN THE FAMOUS LAKE PARK REGION

far-famed small-mouthed black bass, "the gamest fish that swims." Almost surrounding the city is a chain of seven large lakes which has been pronounced by Mr. Warren Upham, who is a great authority on Minnesota, the finest chain of lakes in the state. No wonder summer cottages and hotels dot the beautiful wooded shores.

A few miles from Alexandria we come to Inspiration Peak. After quite a climb we leave our autos and mount to the top. As the day is clear, we have a fine view of the country round about and are able to count over twenty lakes, their blue waters gleaming in the sunshine.



COURTESY OF ENTERPRISE MFG. CO., AKRON, OHIO

SMALL-MOUTHED BLACK BASS

This point in the Leaf Hills is 1,750 feet above sea level.

Not far from the foot of the peak, we find a camp most invitingly located near a lake shore with a clean sandy beach where we can take a cool dip. We decide to spend the night here. Early in the morning the fishermen of our party are out. Some of us prefer to stay in bed, and at our late breakfast we feast on the delicious fish which the early risers have brought in.

Like hundreds of others we wish our vacation would never end, and we know now why Minnesota has become the "Playground of the Nation." Everywhere we go, we meet people who tell us of other beautiful places where they have been. We cannot visit them all, but we have something in store for another summer. From now on we shall see more of our beauty spots and shall help in making our Ten Thousand Lakes known.

As a governor of the state said in welcoming visitors to

Minnesota a few years ago, it is not just the money spent here which we value. In the summer time, North and South, and East and West mingle here and get acquainted with each other, thus creating a better understanding among the people of the nation. This tends, as the governor said, to make us one great united country.

What part of Minnesota is called the Lake Park Region? Why? List all the ways you can think of in which our ten thousand lakes are a source of income.



COURTESY OF TEN THOUSAND LAKES OF MINNESOTA
ASSOCIATION

CHAPTER XV

OUR FORESTS

In reading, note the results of wasting the gifts of nature, and at the same time consider whether they may be brought back.

Very necessary to the comfort of the pioneer were the gifts of the forest—the fuel to keep him warm in winter and the material for building his home. By hunting the animals which lived in the forest, he obtained not only furs but also meat. Thus the forests supplied his simple needs for food, clothing, and shelter. Always with the coming of the settler, the animals retreat deeper and deeper into the woods. It is quite natural, therefore, that when the fur trade becomes less profitable, attention is turned to the trees, and that lumbering should take its place as the second industry in a new country as it develops. So it was in Minnesota.

More than half of the state was once covered with magnificent forests, including the pine regions of the north and east and the hardwood belt, which bordered the pine on the south and west. The evergreens include the three pines, the white, red or Norway, and the jack, as well as the spruce and the balsam fir. One of the most extensive white pine forests in the world once grew in Minnesota in



PHOTO BY KENNETH M. WRIGHT

NORWAY AND WHITE PINES ON SHORE OF LAKE ITASCA

the St. Croix and Mississippi Valleys. This tree makes the most valuable lumber of all the soft woods.

Even in the early days of Fort Snelling the cutting of timber was begun in the St. Croix Valley. The Indian chief who claimed the land first received payment for the logs. This was stopped by Colonel Snelling as the government had not authorized the cutting. In the year 1837 treaties with the Indians opened the land to settlement, and the lumberman at once got busy with his axe. Buzzing sawmills soon appeared along the streams. A prominent man in the early lumber business was Franklin Steele, later of St. Anthony, who began work during this very year. With him he brought laborers, tools, and food. A logging camp was built at St. Croix Falls and from here rafts of logs were floated down the river. The first commercial sawmill in Minnesota was located at Marine. This mill sawed its first lumber in 1839. Almost at the same time the St. Croix Lumber Company, which was started by Steele, put up a mill and used the waterpower at St. Croix Falls.

Although these early lumbermen came from eastern states, which had already lost most of their forests, they were too short-sighted to see that Minnesota's forests would be lost in the same way. For many years after sawmills had been built on our rivers, it was believed that the pine forests could never be exhausted. Later this belief was given up, but the time of lumber shortage was thought to be so far away that no one then living need worry about it. There was no public control over private

lumbering concerns, and the pioneers used reckless methods. Young growing trees went down with the old ones, which were ready to be cut. The glowing accounts sent by the lumbermen to friends in the East, boasting that the lumber supply was inexhaustible, drew many settlers to the state. For many years lumbering was the chief industry in nearly every new town that sprang up in Minnesota.

Stillwater's first sawmill was opened in 1844, and this place quickly developed into the leading lumber town of Minnesota. At that time it was thought that Stillwater would become the largest city in this part of the country. More mills were built in or near town, and at one time twelve mills were running at once. For many years Stillwater had a decided advantage because of nearness to the pine forests and also on account of its location on the St. Croix River. The river was convenient not only in handling the logs, but in getting them to markets toward the south. Its population for a while was larger than that of St. Paul, and great rivalry existed between the two places.

Most of the early lumbermen were from the lumber districts of Maine, and they brought with them the methods used there. The lumbering was done in the winter when the heavy sleds could be easily dragged over the snow and ice. Early in the fall work on the logging roads was begun by the lumberjacks, who were at first largely French Canadians. The heaviest loads have been hauled in the Lake States on iced roads. Ruts three to

six inches deep and somewhat wider than the runners served to hold the sled in place on the road. Such a road required much attention. It had to be frequently sprinkled, sometimes every day, and the ruts often had to be cut out two or three times a week. If the ruts were cut in the snow, a depth of eight to twelve inches was required, and such ruts were later built up with ice. Ruts cut in the soil gave the best results, for these furnished a solid bed for the ice; but these could not be made in stony soil. In early days ruts were cut with an axe, but later a rut-cutter was found more satisfactory. This made smoother channels for the sleds, and the saving of labor reduced the cost of the road.

Great trees were chopped down, and the branches trimmed off. The trunks were put on sleds and dragged by horses or oxen to a place near the river, where they could be slid down almost to the water's edge. There the trees were cut into logs and marked with a letter or sign, which had been chosen by the owner. In the spring these logs were rolled into the river and floated down to the boom, where they were sorted out according to the marks. Sorting the logs was a big job, for in time there came to be two thousand different log marks. The boom served to catch and to hold the floating logs. It was made of logs fastened securely together end to end. These long chains of logs were anchored firmly to each bank of the river. Although the boom was built to withstand the constant pressure and pounding of the logs, it sometimes broke. In 1843 the great boom at Stillwater broke, and



LOAD OF LOGS ON ICED ROAD—TWO HORSES CAN EASILY HAUL A
VERY LARGE LOAD ON THESE ROADS

the whole winter's cutting of logs floated down the Mississippi. This led to the building of sawmills at Red Wing, Winona, St. Louis, and many other points on the river. An early visitor to Minnesota tells of passing great rafts, three hundred feet long and one hundred feet wide, on his way up the Mississippi. Sometimes sails were fixed to these rafts to make them float faster.

Of course Minnesota furnished a market for comparatively little of our first lumber, for the population as late as 1850 was little over 6,000. However, it found a ready sale in the river towns of Iowa and Illinois, also at St. Louis, Missouri. So far as easy lumbering is concerned, the pine forests of Minnesota have seldom been equaled, the world over. By reason of its cheapness and the ease with which it could be obtained, Minnesota lumber proved a powerful factor in the rapid settlement and development of the prairie regions to the south and west. There was a great demand for our lumber in these treeless districts; and without this easily obtained building material, farming could not have been developed at so early a date.

About ten years after logging began on the St. Croix, the pine forests of the Mississippi were discovered. An explorer, who was sent out by Franklin Steele, found a wonderful forest of white pine on both sides of the Rum River, which joins the Mississippi some miles above St. Anthony Falls. The company which Mr. Steele had formed had wished to use the waterpower at the falls, but had been afraid of not being able to obtain sufficient logs from up the river to make their mill pay. After this dis-

covery a mill was built by Mr. Steele who held the claim to the land which controlled the waterpower. The first drive of logs from the Rum River was made in 1847, but all these logs were lost on account of high water. As a result Mr. Steele was obliged to build his mill of hard wood, cut nearby on Nicollet Island. The machinery which had been ordered for the mill was lost in the Erie Canal, and a further delay was caused in starting the mill. This was the first mill ever built on the Mississippi River, except the small one which cut the logs for Fort Snelling. Logging in this section developed rapidly. Logs were accepted by the merchants of St. Paul and St. Anthony in payment for supplies furnished the mills and the logging crews. These logs were rafted down the river to St. Louis



COURTESY OF TEN THOUSAND LAKES OF MINNESOTA ASSOCIATION

GREAT LUMBER MILLS ARE FAST DISAPPEARING FROM OUR STATE

and other southern points, and the merchants often received no money until a year later.

By 1850 lumbering was established as the chief industry of Minnesota. Settlers poured into the territory, and during the next six years the population jumped from 6,000 to 100,000. Nevertheless the lumber industry was greatly handicapped by the lack of railroads. When the river was frozen, Minnesota was shut off from the rest of the country. At last an all-year market was established. This occurred in the year 1867 when Minneapolis was connected with Prairie du Chien by railroad. Up to this time the logging crews had worked only where they could easily reach the rivers, for timber was too bulky to be transported for any distance by wagons. From then on the lumber output of the state increased steadily. The small lumberman gradually disappeared, and the business became concentrated in the hands of a few wealthy companies who owned vast tracts of forests and also owned their own mills and built their own railroads. These companies worked their way deep into the forests at the headwaters of streams. In 1855, by the treaty with the Chippewa Indians, the great pine regions near the source of the Mississippi had been opened. A few continued operations in a small way by means of portable mills, which could be moved from place to place. Although the quantity of lumber increased, lumbering gave way to agriculture as the leading industry of the state during the sixties.

In 1890 Minnesota ranked first in the country in lum-

ber, and the business continued for years on a gigantic scale. The lumber camps with their warm log houses and their high-priced cooks were quite different from the camps of fifty years back. The highest lumber output was reached in 1905, when about two billion feet were produced. This quantity of lumber would build a walk seven and a half feet wide, extending twice around the earth. Think of a board walk 50,000 miles in length! From that year on the yield rapidly decreased. When there were no longer logs to feed the Minneapolis mills, the greater part of the lumber was cut in the region near Duluth. Much of this was shipped to Chicago and Buffalo because of the cheap freight rates on the Great Lakes. Virginia in northern Minnesota, Cloquet on the St. Louis River, and Bemidji on the Mississippi, became famous for their great sawmills.

Only within a few years has it been realized that the days of Minnesota lumbering are numbered. If laws had been passed fifty years ago permitting the cutting each year of mature trees only, a reasonably large cut of lumber each year might have been made indefinitely. The pine forests in most cases covered the sandy and gravelly portions of the state, unfit for farming. Although white pine is often found on clay soil, which can be used for farming after the removal of the stumps, Norway and jack pine are found on poor sandy land, the jack flourishing on the very poorest land of all.

There are millions of acres of land in the state which are fit for forests alone and will, it is hoped, be so used

in time. Farmers, who have taken up cut-over land in the northern part of the state, were perhaps successful for a few years, until the decayed vegetable matter or humus from the forest became exhausted. Then the land became entirely useless and had to be abandoned. Sometimes the land proved absolutely worthless for farming from the start. Vast tracts have thus come back to the state on account of unpaid taxes. Doubtless forty per cent of the land in the Lake States (Michigan, Wisconsin, and Minnesota) can be classed as timber land and will never be good for anything else. A large part of the land in the northern part of our state may be so classed. No taxes are paid on it, the state gets nothing from it, and it is entirely unproductive and of no benefit to anyone. In 1899 the State Forestry Board was created by act of the Legislature, and before long a small beginning was made in reforesting these lands.

We still misuse our forests, cutting them away more than four times as fast as the annual growth throughout the United States. Great sawmills left to decay are not an uncommon sight in the northern part of Minnesota. One can see evidences that once acres and acres around the mills were piled with lumber. Now the forests round about are gone, the buzzing saws are quiet, the railroad which once carried away carloads of lumber each day is deserted, and it will be only a matter of a few years before the last trace of this great industry has faded away from the spot.

After the larger and more valuable trees had in large

measure disappeared, the pulp and paper mills were started, consuming spruce and balsam and other woods which grow abundantly in the north. Paper mills started up at Cloquet, Grand Rapids, Sartell (near St. Cloud), and at International Falls. Cheap print paper, such as is used for newspapers, is most commonly made, but some of the mills turn out high-grade paper. Light and compact, the manufactured product can easily be shipped long distances.

The Christmas tree industry is increasing in our state, and Minnesota probably furnishes at least one tenth of the nation's supply. This may be a benefit to the forests, for by thinning out crowded trees, those which are left have room to grow. Unfortunately the average Christmas tree cutter slashes right and left, stripping attractive roadsides of their beauty, and taking every tree which looks to him as if it would sell. Large trees are sometimes felled just to obtain their tops. As tops of trees are often wasted in cutting for pulpwood, the cutting might be thoughtfully timed, so that many of these could be used in the Christmas trade. Properly regulated, this industry may prove a valuable and permanent source of income.

Never again will the lumber business attain its former importance, but neither will it die out entirely. The poorer kinds of wood have been forced into use. The aspen, birch, and jack pine, which are sometimes called "weed woods," grow quickly and thickly on land which has been cut or burned over. Many uses have been found for these woods. Boxes, toothpicks, and clothespins are

made from them; and from the mill waste, in some places, is manufactured a material which is used in walls for deadening sound and keeping out both heat and cold. Experiments in making artificial lumber are being conducted. But when we read in the newspapers that certain mills are using every part of the tree except the whispering in the branches, we feel like saying that it is too bad they did not learn economy some fifty years ago. Very few know or care that Minnesota is now burdened with an annual freight charge of many millions of dollars on the lumber she imports from the West and South. Several years ago we paid over eleven million dollars for freight alone, and this bill constantly increases.

As a result of cutting down the forests, the tributaries of the upper Mississippi have lost at least half of their water, and lakes and streams no longer remain at about the same level the year around. The water from rain and snow used to soak into the bed of decayed vegetation or humus, which is found everywhere under forests. This absorbed water like a great sponge. The tree roots led the water deep into the ground to be stored up there and to be gradually fed out by springs all through the year. Now the spring rains rush down the slopes, carrying off the best soil, digging great gullies, and flooding the valleys, which later become parched and dry. Thus the forest is of untold benefit in preventing both flood and drought; and it is most desirable that the land near the source of a navigable stream, on which cities and water power plants depend, should be forest-covered.



A FOREST FIRE

Not only has the lumberman wasted our trees, but one of our foresters tells us that fire, the terrible red peril, has destroyed more timber in Minnesota than lumbermen have cut. The Indians, our first citizens, were terribly afraid of fire, and so careful that in early days forest fires were rare. The citizens of today should be equally careful.

Before many years, if no change takes place, our people must face a lumber shortage, which is already felt in the East, and which is bound to become worse in the next fifty years. How can we get along without this most useful article? A man knows that wood goes into the construction of his house, but is surprised when he is told that Minnesota in one year must have thirty-three million

feet of lumber merely for making boxes, crates, cartons, etc., for shipping her eggs, her dairy products, and her canned goods.

Yet the outlook is not entirely hopeless. In 1908 the Chippewa National Forest, on the shores of Cass Lake, was created by act of Congress. Formerly this was called the Minnesota National Forest, but since this territory had been previously ceded to the government by the Chippewa Indians, the present name is well chosen. In the following year President Roosevelt set aside the great Superior National Forest.

It is the aim of the United States Forest Service to manage these forests so that they will render the greatest service to the public. The protection of the trees comes first, in order that the needs of the state for timber may be met. Each forest is in charge of a supervisor and is divided into districts, in each of which a ranger is stationed. The rangers and the patrolmen under them are always on the watch for fires. Generally only ripe trees, or those which have reached their greatest growth are cut. A forest officer selects the trees to be removed. After a certain age is reached, a tree becomes less valuable. In the case of a Norway or white pine, this is over one hundred years, but with the jack pine it is less than half that time. Enough big trees, however, are left to preserve the ground cover. This is important in regulating the flow of streams and also in producing seed, for the forester always thinks of getting a second crop started. The pine cones are collected, and well-equipped plants extract the

seeds. By placing the cones on racks and heating them, the seeds are loosened. Next the cones are put into cylinders which revolve, and in this way the seeds are separated. Tree nurseries are maintained, where a million seedlings at a time are being raised for reforestation. Since 1916 the Forest Service has been planting about one thousand acres of burned over land each year with Norway and white pine seedlings. These little trees have grown two years in the nursery and two years in some other place to which they have been transplanted. With four years of healthy growth behind them, these seedlings have a good start. It will be a long time before these trees are ready for use—possibly a hundred years—but only by such patient labor can man make up for the gifts of nature which he has wasted. The Forest Service also builds roads and trails, which open the forests so that visitors may enjoy them. Firebreaks through the forests are cut and kept clear. In case of fire, these provide an open space from which the flames may be fought.

When timber is sold on government land, the law sets aside one fourth of the money received to be spent on roads and schools in the counties where the timber is cut.

The Chippewa National Forest is part of one of the largest reservoirs in the world, including many of the numerous lakes forming the source of the Mississippi. About 1880 the United States Government began to construct a series of dams at the headwaters of the Mississippi for the purpose of regulating the stream flow as an aid to navigation. Five dams have been built. The

largest, Winnibigoshish Dam, which can store one hundred billion cubic feet of water, is within this forest. However, these expensive dams do not regulate the streams nearly so well as did the millions of roots and the spongy bed of the forests which once entirely covered all the land near the source of the Mississippi.



COURTESY OF MINNESOTA STATE FOREST SERVICE

Now what can the boys and girls of Minnesota do to help in the great work of saving and restoring our forests? All fires except those set by lightning are man-made and preventable. Never leave a campfire without being sure that the last spark has been put out, and never drop a lighted match in the woods. Cultivate habits of thrift in your school work, and use no more paper than you need.

Inform yourselves on matters pertaining to our forests. When you compose the voting body of the great state of Minnesota and votes are needed to pass an amendment for the conservation and efficient management of our timber lands, don't skip over this part of your ballot with the thought that this is no concern of yours.

With the intelligent cooperation of the citizens of the state, thousands of square miles of land which is entirely unfit for farming, but is suited to trees, may be scientifi-

cally reforested. The lumber business may be so increased as to become an industry as dependable as agriculture. Instead of furnishing untold wealth to a few men, our forests may then supply the needs of all, and again become the glory of our state.

A people without children would face a hopeless future; a country without trees is almost as helpless; forests which are so used that they cannot renew themselves will soon vanish, and with them all their benefits. When you help to preserve our forests or plant new ones, you are acting the part of good citizens.

THEODORE ROOSEVELT.

Explain why our lumber caused an earlier development of farming in the prairie states near Minnesota than could otherwise have been possible.

The chapter "Our Forests," was written in the Chippewa National Forest on Cass Lake. The author received valuable help from the Forestry Department of the University of Minnesota.



CHAPTER XVI

OUR WHEAT FARMS

As you read, picture farms where the golden grain extended as far as the eye could reach, farms so large that the owners have been known to be lost on their own land.

Up to 1840 the chief business of Minnesota was the fur trade, but by 1850 a change had taken place. Lumbering was fast becoming the leading industry. The early settlers kept close to the timber, because the fuel needed for the severe winters could be easily obtained. At this time the wonderful soil of our state was still undiscovered. Besides furs and lumber the only product which had been sent out from the state was cranberries.

The immigrants who first came here remained in the cities. In fact there was then no agriculture worthy of the name. Even later than this, hay in bales was imported from Iowa to feed the horses of St. Paul, although millions of tons grew in the Minnesota Valley within a few miles of the city. Because Minnesota failed to feed her own people, there were statesmen in Washington who looked upon the territory as worthless.

In the early fifties this country was wild with speculation. As the population increased, the price of land ad-

vanced. Speculators were everywhere platting towns in expectation of the coming of the railroads. Town lots sold at an extravagant price. The panic of 1857, caused by the failure of some large eastern companies, brought disaster to Minnesota. Nowhere did it strike harder than at St. Paul, causing the city to lose suddenly fifty per cent of its population. The people who were left turned strongly against speculation and toward the cultivation of the soil. Thousands of farms were opened, and there was work for everyone. And so what had at first been a dreadful affliction to nearly everyone in the territory turned out to be a blessing in disguise. Men left speculation for honest labor and began to develop the vast resources which nature had provided. Farmers experimented in raising wheat, corn, and other grains and were surprised at their success. By 1859 Minnesota had a surplus of farm products valued at two million dollars. During the years from 1850 to 1860 farm lands were being so rapidly occupied that Minnesota had her greatest increase in population. In these ten years her population increased 273%—a percentage unequaled by any other state in the same length of time. Ever since then agriculture has remained the leading industry of the state.

On the farms opened in southeastern Minnesota, it was not unusual to have a wheat crop of from thirty to forty bushels to an acre. The fertile soil made the cultivation very simple; and, as almost no capital was required, it was natural that the first settlers all turned to this one crop. However, the best of soil will become exhausted in time,

and after twenty or twenty-five years, six or eight bushels to the acre were frequently all that the farmers could coax from the land. Wheat raising in this region was at last abandoned, and corn and hogs were tried.

Just about the time that the raising of wheat became unprofitable in southern Minnesota, the valley of the Red River of the North began to attract attention. It was soon discovered that this was one of the finest regions in the world for wheat. Land was cheap, and with very little effort on the part of the farmer forty-five bushels to the acre were produced. On account of its richness this region has been called the "American Valley of the Nile." As a matter of fact, the Red River Valley is not really a river valley at all, but a vast lake plain.

In the Glacial Period many, many years ago, perhaps thirty thousand years, the ice blocked the rivers in northern Minnesota and the part of Canada nearby. This prevented the rivers from draining toward the north, as they do at the present time. The waters, from the melting edge of the glacier, rose higher and higher in the basin lying now in Minnesota, North Dakota, and Canada. Thus an immense, shallow lake was formed, which was one fifth larger than all the Great Lakes together. This lake was about 700 miles long. It is now known as Lake Agassiz. At last the lake rose high enough to form an outlet to the south. Imagine this mighty flood of waters following the course of the Minnesota River and joining the Mississippi at the present site of Fort Snelling. Now the Minnesota River wanders through the broad valley once filled by

this gigantic stream. As the ice melted, Lake Agassiz gradually became smaller. At last nothing was left of it except in the deepest depressions, where are still found Lake Winnipeg, the Lake of the Woods, and several smaller lakes.

Fertile soil is a long time in the making. The fine earthy or mineral material settled in the great lake basin and slowly became mixed with decayed animal and plant material, until a loam many inches deep was produced. After the waters disappeared, rich grasses sprang up, and for countless years this was the favorite feeding ground of great herds of buffaloes. Thus the already fertile soil was further enriched.

The flatness of the Red River Valley is remarkable; perhaps it is the largest section of almost flat farm land in the world. Doubtless this flatness is partly due to the great quantity of fine material which was deposited smoothly on the bottom of the shallow lake. The Red River Valley is so flat that one can see only for a distance of three or four miles. The tops of houses and grain stacks are first seen; and, as one approaches, they gradually come into full view; just as at sea one is made to realize that the earth is round. On account of the flatness much rain falling in the valley cannot find its way to streams, but sinks into the soil. The even surface and the general absence of boulders and of trees make it easy to use farm machinery. Only by deep borings through the smooth layers of clay and silt, as this water-deposited soil is called, can bed rock be found.

Lake Agassiz probably existed for about a thousand years. On the east and west sides of this valley plain are smoothly rounded ridges of gravel and sand, a few feet high and several rods wide. These ridges, which lie one within another, are the beaches formed at the edges of the lake as it became smaller and smaller. After a period of rapid shrinking the lake would hold its own for a while, and the action of the wind and waves would form a beach. In early days many of the roads followed the crests of these ridges. Hundreds of farmers have located their homes on these beach ridges because they are always sure of perfectly drained cellars even in the wettest seasons. Then, too, the wells dug through the sandy gravel furnish better water than wells on the clay land near. These beaches are of such great interest to geologists (scientists who study the formation of rocks and of the soil), that visitors from European universities are not uncommon here.

A treaty with the Indians which was confirmed by President Lincoln in 1864 opened this great new wheat region to settlement. About eleven million acres in the Red River Valley, partly in Dakota and partly in Minnesota, were thus secured. The years from 1875 to 1885 were noted for the great immigration to this valley of golden promise. Many settlers who were experienced wheat farmers came from southeastern Minnesota, others from neighboring states, and some directly from Europe. Lines of prairie schooners crossed the state carrying the farmer, his family, and all he possessed. Sod houses, the settlers' first homes,

dotted the plain. Thriving villages with schools and churches were built, for these people had come here to find homes. On the great farms, sometimes thousands of acres in size, wheat was raised, wheat, wheat, and almost nothing else.

Suddenly Minnesota became one of the principal granaries of the world. The development of the Red River Valley on such an enormous scale was made possible by three causes, the first of which was the labor saving machinery for reaping and threshing. Reapers and threshers, which came into general use at the time the prairie region of Minnesota was being settled, brought increased profits to the farmer. Not only was labor reduced to one fifth



COURTESY OF NORTHERN PACIFIC RY.

WHEAT FIELD



COURTESY OF GREAT NORTHERN RY.

THE "WILLIAM CROOKS"—FIRST LOCOMOTIVE USED IN MINNESOTA,
STILL KEPT IN ST. PAUL

of the former cost, but more important still, a large crop could be harvested in a few days. Many more men and a much longer time would otherwise have been required, and the huge crops would have suffered loss from storms before they could have been brought under cover.

The second cause of the rapid increase of wheat farming was the coming of the railroads. Without railroads the wheat farms could never have been far from a navigable river. The freight charges for carrying the produce of the farmers were a big item in supporting the railroads, so it is easy to see how the building of railroads and the development of new farm lands kept pace with each other.

On June 22, 1862, a great day in the history of Minnesota, the first locomotive left St. Paul for St. Anthony,

a distance of ten miles. The rails were of iron, instead of steel. The engine, which burned wood in place of coal, had been brought up the river on a barge and had been landed at St. Paul the October before. This locomotive, which was named the William Crooks in honor of the first engineer of the road, is still kept in St. Paul as a relic. The company which ran this first line developed later into the Great Northern Railway Company. The absence of highlands, which made grading comparatively cheap, and the presence of forests, which furnished ties at a low cost, were valuable helps in railroad building in our state. Not many years after the first locomotive made its appearance, the great commercial routes were established much as they exist today. Minnesota was no longer dependent on the Red River cart or the steamboat. It is strange, however, that on the very day that the first locomotive started out from St. Paul, a train of ox carts with its load of costly furs arrived in that city.

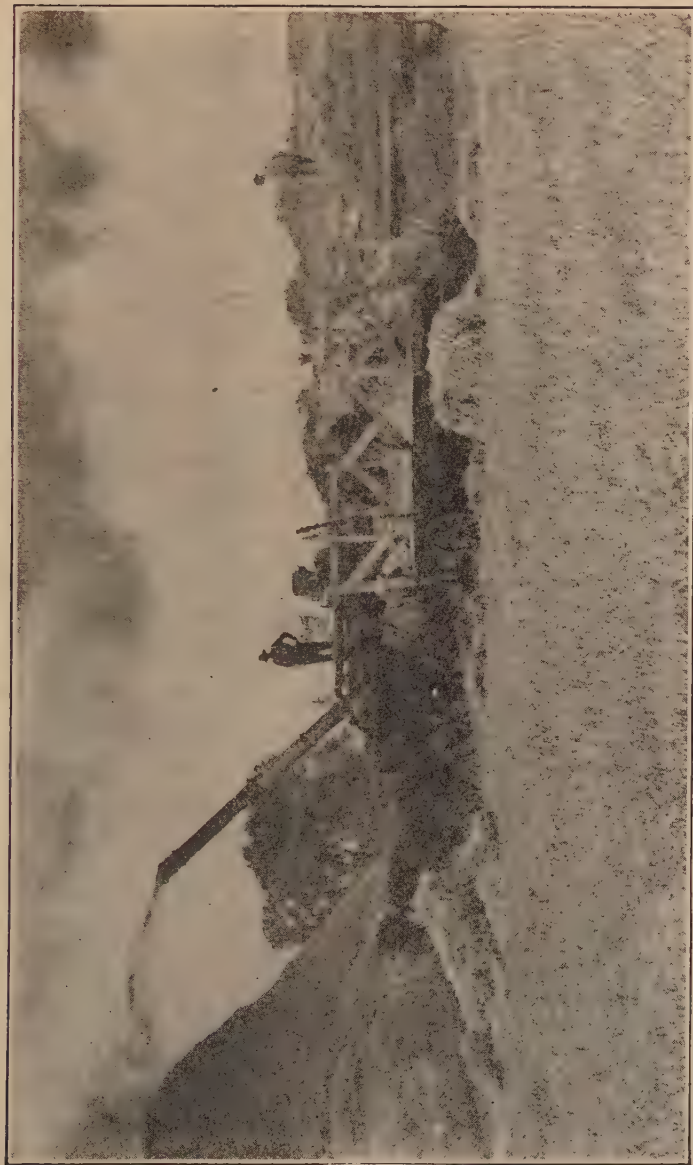
Some of the early settlements through which the railroad failed to pass moved houses, stores, and churches to the railroad in order to have advantages equal to those of new towns located on the line.

The storing of the great wheat crops was taken care of by the grain elevators. These tall, awkward buildings were soon seen at every railroad station in the wheat region. In a flour mill the wheat was ground on a lower floor and then elevated to the bolting floor by means of an endless belt, to which cups were attached. A plan similar to this was adapted to the elevators, giving them

their name. The machinery in an elevator was very simple and was run by a steam engine or sometimes by a horse. On one side of the elevator was a scale. The farmer drove his load of wheat on to this to be weighed. On the other side of the building was a side track, where a car could stand while being filled with grain. It would have been impossible to handle the wheat crops of Minnesota without these great elevators.

The wheat farmer plows the ground and then uses the harrow, which is like a great rake, to break up the soil so that it is soft and fine. In the fine soil on the level plain of the Red River Valley, machinery is easily used. Next comes the drill, which is drawn over the land, planting even rows of grain. These machines make quick work of the planting. In states south of Minnesota, such as Kansas and Illinois, and to some extent in the southern part of our own state, wheat is planted in the autumn. By the time winter comes, the tiny green blades cover the fields. The wheat keeps green all winter under its warm covering of snow. The farmer has no cause to worry if there is plenty of snow, but in an open winter the wheat is killed by freezing. Just as soon as spring comes, the winter wheat, as it is called, begins to grow; and by the middle of June, it is sometimes ready to harvest.

The first machine used in harvesting is the binder, which not only cuts the grain, but also ties it with twine into bundles or sheaves, which are left to dry for a few days before the wheat is threshed. The sheaves are fed into one end of the threshing machine, while at the other end



THRESHING MACHINE AT WORK

is a long pipe or blower. The stalks or straws are blown out through this pipe by a strong blast of air. Soon the straw piles up in a great golden heap beneath the blower, and at one side the wheat pours out. Then it is taken to the elevator to be kept until sold.

In Minnesota a very small part of the wheat is planted in the fall. Most of it is spring wheat, which is planted in the spring after the ground is free from frost. It matures rapidly in the long sunny days and is harvested in August. Farmers who tried to raise winter wheat in the Red River Valley found that the severe winters killed much of it, but they were very successful with spring wheat. Now there is a great difference in the food values of spring and winter wheat. The outer coat on the spring wheat kernel is harder than that of winter wheat. The gluten, which furnishes the nourishing element in bread, lies in the hard outside coat just beneath the bran covering. Up to 1870 the mills of Minnesota preferred winter wheat for flour and paid a higher price for it. In those days only the starchy center of the wheat was used in flour, while the nourishing gluten was rejected. Of course this was very wasteful. So at that time the spring wheat raised in the Red River Valley was regarded in the market as inferior.

Do you remember the flour mill in Minnesota which was built by the troops at St. Anthony Falls to furnish flour for Fort Snelling? This was never intended to supply the general public. The first commercial mill was erected in Washington County, a mile above Afton and

near the St. Croix River, by Lemuel Bolles. He used his wife's silk dress for bolting the flour. This was in 1845.

Unless they were fortunate enough to live near a grist mill, the pioneers used to grind their own wheat in hand-mills, which were not unlike coffee mills. The grist mills, often run by horse power, served people over a wide territory. Frequently people were obliged to wait several days to have their wheat ground into flour, because so many were there ahead of them. The first commercial mill of any size was built in Minneapolis in 1854.

It was stated that the great development of wheat farming was due to three causes, two of which have been mentioned, namely, labor saving machinery and the railroads. The third cause was the improved method of milling. The millstones used to be set closely together and were run at high speed, reducing the wheat to flour at one grinding. In the harder spring wheat the woody bran was imperfectly removed, and this caused the flour not only to be dark-colored, but to absorb moisture readily. For this reason the spring wheat flour did not keep well but soon became musty. In 1870 a Frenchman named La Croix came to Minneapolis and introduced a machine such as was used in France, called the "middlings purifier." The Minneapolis mills sent a representative to Hungary to study methods of flour milling there. As a result, in 1874 the Hungarian plan of using iron or porcelain rollers in place of millstones was also introduced.

The middlings came from the part of the wheat kernel which lay directly under the bran covering, the part which

contained the gluten. By the new process the grain was ground several times, the machinery being run at a reduced speed and pressure. At first the wheat was merely cracked, and the bran removed. In this way the discoloration was avoided; and, best of all, the gluten lying just beneath the bran was largely saved. By the old process five bushels of wheat were used to make one barrel of flour, and by the new process four bushels and seven pounds made a barrel of the same weight. In the next ten years the wheat crop of the state doubled. Spring wheat, for which there had been previously little demand, rose ten to forty cents a bushel. First grade spring wheat flour was put on the market as Minnesota Patent, and for a time commanded a price of three dollars a barrel above any other. The Red River Valley became in truth the "Bread Basket of the World."

In 1878 Minnesota began to export flour to foreign countries; Minneapolis sent out over one hundred thousand barrels. For the first time farming in Minnesota became professional. Spring wheat brought commercial prosperity, and for years it was almost the only commercial product of Minnesota agriculture. And so our state came to rank first in the whole country in wheat. At the World's Exposition held in Paris in 1900, in contest for the best flour in the world, we took first premium.

However, the fact that Minnesota no longer holds this rank is no cause for regret, for at the present time she stands higher as an agricultural center than ever before. Her reputation for dairy products, livestock, potatoes, and

many other lines is fast becoming nation-wide. It is now well known that the newer type of farming brings prosperity to a greater number of people than the one-crop wheat farming, which once made Minnesota famous.

Name the three causes which made wheat raising on an enormous scale possible.

Our wheat farms have been compared to a gold mine, because of the rich income from each. There is another point of similarity not so desirable. A gold mine is bound to run out in time. Wheat exhausts the soil, and the wheat farm may become almost as worthless as the worked-out mine. In the next chapter we shall see how intelligent farmers have prevented the wheat farms from running out.



COURTESY OF GREAT NORTHERN RY.

ELEVATOR

CHAPTER XVII

THE PRESENT TREND OF FARMING

Read this chapter to know why many of our farmers have given up one-crop farming for balanced farming.

Although our state was long known as "The Bread Basket of the World," everyone realizes that her newer title, "The Bread and Butter State," means much more in the way of permanent prosperity. She won this name at the Buffalo Exposition in 1901, by her wonderful exhibits of flour and dairy products. In Minnesota wheat was king for more than forty years, without any strong rival. However, this crop alone does not form the basis of lasting and profitable farming, for it constantly draws from the soil and gives nothing to the soil in return. Wheat is one of man's best foods and will probably continue to be an important crop in places like the Red River Valley. Here labor saving machinery can be used to great advantage, and the climate is suitable; nevertheless, wheat is no longer the only crop.

In every part of the state where wheat was at one time all-important, corn, which can be used to feed dairy herds and hogs, has appeared on the farms. When wheat dropped from forty-five bushels an acre to less than

twenty, the farmers began to rotate their crops, that is, to raise different crops each year for a number of years. This gave the soil somewhat of a rest, because no two crops draw on it in exactly the same way. But this was not enough. By raising livestock and by keeping on with the rotation of crops, the fertility of the soil was built up.

Year by year the corn crop has increased in order to feed the increasing number of cattle. Southern Minnesota lies in the same belt of sunshine as Iowa and Illinois, and has long been recognized as being in the Corn Belt. Here the farmer has successfully kept up his soil, largely by means of livestock, which give back to the soil what the crops have removed. The use of fertilizers to restore the soil is almost unknown in this part of the state.



COURTESY OF NORTHERN PACIFIC RY.

CORNFIELD IN WADENA COUNTY

Many years ago corn growing was made a paying industry from Iowa to Canada, by the production of two early varieties of this grain, at the Experiment Station of the University of Minnesota. One kind ripened earlier than varieties grown in Iowa, and the other kind could be safely grown in the Red River Valley. By using tested seed, farmers, even in the northern part of the state, can raise corn successfully. In fact Indians raised corn in northern Minnesota more than a hundred years ago. The abundant rains which occur in the months of June and July are favorable for the growth of corn. Little by little the Corn Belt is slipping northward.

By testing his own corn, the farmer has a way of finding out which ears are the best. He marks off a long strip of cloth in squares, and on each square he fastens grains of corn. The grains on each square are taken from different ears, and the ears and squares are numbered carefully. The cloth, when rolled up and tied at both ends, looks like a rag doll. After soaking it in water, it is placed in the sunshine. In a short time the corn sprouts, and the farmer picks out the seeds which have the best sprouts. Finding from which ears these seeds came, he plants only these; and as a result gets corn with strong stalks, bearing large ears.

Every farm should have a silo. In Todd County, which is in the central part of the state, some townships have adopted the slogan, "A Silo on Every Farm." The silo was introduced into this country from Europe, over fifty years ago. All of you have seen these great round tanks,



A SILO ON A MINNESOTA FARM

generally made of concrete; but if you have never lived on a farm, perhaps you have never learned the real purpose of a silo. The corn is cut when almost full grown, but while still green. The whole corn plant is run through a machine, which chops it into small pieces. As this keeps fresh in the silo, it furnishes the cattle with green food all through the winter. Cows fed on green food not only give richer milk than when fed on dry hay and grain, but also give more milk. Early frosts do not affect the corn raised for silage, as it may be cut two weeks or more before it matures. No wonder the intelligent farmer regards the silo as an indispensable part of his farm equipment.

Other fodder crops, for example the soy bean, may be

used with corn in the silo. A few years ago the soy bean was almost unknown in the Corn Belt. It is not only very easy to grow, but withstands drought and frost better than corn. In the future this crop is likely to become much more important on Minnesota farms than it is today.

Livestock and diversified farming, that is the raising of a variety of crops rather than one crop, keep up the fertility of the soil. With this kind of farming dairying goes hand in hand. Of course farmers had long kept cows to supply themselves with milk; but dairying, as an industry, scarcely began in Minnesota before the early eighties. In 1878 the State Dairymen's Association was organized, and an effort was made to interest people in dairying. Several reasons were advanced to show that, in the long run, it paid better than wheat growing. The dairy industry was not so likely to be crippled by grasshoppers, unfavorable seasons, or hailstorms. Neither did it wear out the soil, as raising wheat had done. On account of the condition of the soil mixed farming was becoming necessary in southeastern Minnesota, in what had been the original wheat belt of the state. The establishment of the School of Agriculture of the University of Minnesota and the Experiment Station was a great step forward. Before long Minnesota creamery butter, which had had no particular reputation, began to rank with the best in the markets of the East. Now Minnesota is the leading butter state.

In 1877 the cream separator had been invented in Sweden. Mr. J. J. Hill had one on his farm in 1885, and

by 1890 it had come into general use. By that time the Babcock test had been developed. Milk is no longer valued by quantity, but by the butter fat which it contains. The Babcock test made it possible to find out from a small sample of milk, the proportion of butter fat in it. The cream separator and the Babcock test put dairying on a scientific basis, and in fact modern dairying could not be carried on without them.

However, it is due to our numerous cooperative creameries that Minnesota has become the leading butter state. In the year 1889 the first cooperative cheese and butter factory in the state was established in McLeod County. The next year, only a few months later, at Clark's Grove in Freeborn County, a group of Danish farmers started to work along similar lines. These farmers had heard



COURTESY OF "THE FARMER"

COOPERATIVE CREAMERY AT MILACA

of the great success of the cooperative creameries of Denmark. This was the first separate creamery to be owned by the patrons themselves. Their creamery became a model for many others, and is often called Minnesota's first cooperative creamery. This form of organization was favored by the State Dairy School, a branch of the School of Agriculture of the State University. The State Dairy School became very active and helpful in the early days of dairying in Minnesota, and has since instructed hundreds of young men and women. In those early days a cow seldom yielded more than one hundred twenty-five pounds of butter fat in a year. Butter making was largely a home industry; the product was not at all uniform, but was sometimes good and sometimes poor. The few creameries which were in operation before the cooperative creameries were established gathered in cream without regard to its quality or freshness. Naturally their butter, as well as the home-made product, commanded a very low price.

There are now several hundred cooperative creameries in Minnesota, but they are all based on the same principles, which laid the foundation of success for those Danish farmers in Freeborn County. The cost of building the plant is paid from a fund made up in this way: for every pound of butter made, a fraction of a cent is withheld, and so each farmer who delivers milk to the plant pays according to the benefit he receives from the creamery. After all the costs have been paid, the profits are divided among those who have brought in the milk,

in proportion to what each has brought. This encourages greater production on the part of the dairyman, for greater production means greater profits. When matters in regard to the management of the plant have to be decided, each man who brings milk to the creamery has only one vote, even though he may bring in ten times as much milk as his neighbor. This prevents one man from controlling the business and tends to bring equal benefits to all. The growth of dairying, since the establishment of the cooperative plan, has been rapid.

At first most of the creameries were in the southern part of the state, but later the central and western counties established great numbers of prosperous plants. Now the northern part of the state is succeeding along this line. For many years a certain town in northeastern Minnesota had depended for its existence on a great saw-mill. When the mill was shut down, disaster was predicted. However, the cream checks from a cooperative dairy, which was started there, more than made up for the lost lumber business.

Minnesota has become so famous, that now even the Danes come across the ocean from Denmark, to learn the latest improvements in dairying. The many advantages of Minnesota have made it one of the greatest dairying centers in the world. With its cool summer climate, rich grasses, and abundance of pure water, it meets every need of the dairyman. The great flour mills of the state also supply rich mill feeds at a reasonable cost.

The state is justly proud of the prizes which her butter has won. At the Paris Exposition in 1900 Minnesota butter took first prize, winning over Denmark, Holland, and Belgium, which have long been famous for their butter. In 1913 the Legislature provided that creameries which fulfilled certain requirements, might stamp their butter with the name "Minnesota." Although the requirements are very strict, these "state-brand" creameries are increasing. We are filled with pride when we hear that Minnesota butter is served on the table of the President of the United States. There is a demand for our best butter in the most distant parts of the country; and it is shipped to such remote lands as Peru, Hawaii, and even far-away China.

Fine breeds of dairy cattle have been brought into the state, for the intelligent dairyman knows that it does not pay to raise ordinary cows, or "scrubs," as they are called. A good dairy cow now produces an average of one hundred and seventy-five pounds of butter fat in a year. According to Professor Washburn, formerly of the University of Minnesota, the production of butter may be said to be a perpetual gold mine. Owatonna, the leading city of Steele County, claims the title of "The Butter Capital of the World." The citizens of Steele County can quote figures to prove that their production of butter fat to an acre is the largest anywhere in the United States. They also congratulate themselves on having attained greater prosperity, than would have been possible if they had kept on growing wheat.

On the best dairy farms the barns are models of cleanliness. The cement floors are washed often. The cows can always have a fresh drink from the running water which flows through their stalls. Many dairies are equipped with milking machines, run by electricity.

In dairying localities cow testing associations have been formed, the object being to find out how much money each cow is making or losing for her owner. A careful record is kept of the production of each cow and the cost of her keep. If she is not paying her board, she is disposed of.

In the production of cheese, Minnesota is making a name for herself. Swiss settlers introduced cheese making on their farms in the southern part of the state. At first the work was done by hand, just as in their homeland. From the start the cheese found a ready market. Goodhue County ranks first in the production of cheese. The town of Pine Island is one of the chief shipping points for cheese, in the United States. Minnesota should be grateful to both the Swiss and the Danes for the part which they have played in developing the dairy industry.

Other valuable forage crops besides corn are clover and alfalfa. The region around the head of Lake Superior is called "The Land of the Big Red Clover," and in Otter Tail County, we find the motto, "Cows, Corn, and Clover." Important as clover is, there is no forage plant more valuable than alfalfa. The original home of this plant is said to have been in Asia, where the Persians raised it centuries before the time of Christ. The name

is Arabic, meaning "the best fodder." Although Minnesota's crop is small compared with that of many other states, we claim to have raised alfalfa earlier than any other state except California. In every county of the state it has been raised successfully, and the Grimm alfalfa has made a great name for itself.

In the year 1857 a German immigrant named Grimm sowed a few pounds of alfalfa seed on his claim in Carver County, not far from Minneapolis. He had brought this seed from Germany, and the neighbors called it "Everlasting Clover." The plants were almost all lost in the next few years from winter-killing and other causes. By gathering the seed from the plants which survived, a variety of alfalfa, which experts agreed was the hardiest form known, was developed.

The Grimm alfalfa is quite different from the common American alfalfa, which came from South America. After years of experimenting, the United States Department of Agriculture recommends it for cultivation in the northern states. This crop has been tested in Alaska and northern Canada with satisfactory results and has been raised in both the dry regions and the cold northern regions of Russia. Owing to its superior hardiness and its wonderful ability to resist drought, there is a great and growing demand for Minnesota Grimm alfalfa seed. It is fitting, that on the Grimm farm, a bronze tablet has been placed on a large boulder in memory of the German farmer who introduced alfalfa into Minnesota.

Experiments are still being made with new varieties of

this plant. Recently Iowa claims to have found an alfalfa which can resist winter-killing better than the Grimm. Time will prove whether the claim is justified.

Another important factor in drawing farmers away from one-crop farms to diversified farming has been the livestock markets and packing plants of South St. Paul. In this city is the largest commercial dairy cow market in the world, and the number of grain-fed animals reaching the packing plants from Minnesota farms is constantly increasing. Another advantage to the farmer is that here he can dispose of the poorer class of animals, which were almost worthless in former years. Of course these do not supply meat, but by modern methods a use is found for them. When the stock yards were first planned, people who lived south of Minnesota said that South St. Paul would never receive enough hogs to make a market because it was outside the Corn Belt. As we have seen, the Corn Belt has stretched greatly in the last few years.

In recent years the production of swine has increased greatly; and on every dairy farm pigs can be raised on the skim milk, which would otherwise be wasted. In fact, they are often called a by-product of the dairy business. This means that, without much extra expense or labor, they can be raised at the same time as cattle, which, of course, produce the principal product of a dairy farm. At present, only Chicago is ahead of South St. Paul in the number of hogs slaughtered.

Corn and sugar beet pulp and tops are used to fatten

hogs, the beet tops make very good dairy feed as well. The sugar beet is rapidly becoming one of the important crops of Minnesota. It is interesting to visit the great sugar refineries at Chaska and East Grand Forks. In the fall one may see loads of beets being carried to the factory. In front of the mill lie great piles of beets ready to be used. These beets are white, not red, and much larger than those which we eat. After washing, they pass through a machine which cuts them into fine strips. The sugar is obtained by boiling the shredded beets in water. The pulp which is left after the sugar has been removed is saved for stock food. Almost all the beet seed is imported from Germany, as the labor of collecting it is slow and expensive. Wealthy men from Colorado, our leading beet sugar state, are interested in the sugar industry in Minnesota. The last few years have proved that the rich black lands of the Red River Valley will produce more sugar beets to the acre than other parts of the country, where this crop has been tried; also that the beets contain a larger percentage of sugar.

Besides cows and pigs, sheep have been found a paying investment by Minnesota farmers. They bring good profits in wool and meat, besides helping to clear the land and to keep down weeds. These animals will thrive on rough feed, which most animals will not touch. The sow thistle is one of the most serious weeds found in Minnesota and a great pest. A farmer in the Red River Valley says that this thistle is ice cream and cake to his sheep. Sometimes sheep are bought and turned into the



COURTESY OF NORTHERN PACIFIC RY.

A FLOCK OF SHEEP—BECKER COUNTY

wheat fields just after the harvest, to feed on the stubble. Before winter sets in, these animals are sold at a good profit.

In many parts of Minnesota the busy hen gives large returns to her owner. On any dairy farm the chickens, as well as the hogs, dispose of the skim milk. Poultry on a large farm can be raised mostly on waste, and at slight cost. The Crookston School of Agriculture advises every farmer to have a good-sized flock. There is hardly a crop which brings in so many millions of dollars each year as do the eggs of the state. The Egg and Poultry Exchange at South St. Paul is the largest of its kind in the United States.



COURTESY OF NORTHERN PACIFIC RY.

POULTRY FARM—OTTER TAIL COUNTY

In a recent year the annual report of the Department of Agriculture names Minnesota as second in the United States in oats, barley, flaxseed, rye, and potatoes. These five crops rank in value in the order in which they are given, the total value being over one hundred forty-six million dollars. Where nights are cool, oats give larger yields than most grains, and in the report just quoted, the oats exceeded in value the four other crops put together. Great quantities of oats and barley are used on stock farms. Hogs are fattened on barley, although corn is their favorite food.

Few states raise flax, but Minnesota produces more than one fourth of the output of the country. In Europe it is grown for its fiber, which is woven into linen cloth; but in this country it is raised mostly for the seed. Our

flax is harvested when the seed is ripe, and from the seed linseed oil is extracted. This is used in mixing paints. Minneapolis is the leading city of the world for the making of linseed oil. What is left of the seed after the oil has been taken out, makes a rich stock food. Recently uses have been found for the fiber obtained from the stalks. It has been manufactured into a sort of felt, which is put between walls in buildings to keep out the cold. Tow, for stuffing furniture, has also been made of it. Weeds are a big problem in the Red River Valley. By raising flax here, the weeds are kept down. Another advantage is that it can be planted later in the spring than other crops. Flax is hard on the soil, so the farmer must not raise it too often in the same place.

In that part of Minnesota which lies between the Mississippi and the St. Croix Rivers is the famous Potato Belt. Wheat has been abandoned here in favor of this crop. Throughout central Minnesota, also, one sees potatoes in the field, potatoes being loaded into cars, and warehouses near the railroads, where potatoes may be stored. The Red River Valley, also, is very proud of its potatoes and makes a specialty of raising them for seed. Some farmers claim as high as six hundred bushels to the acre, although three hundred bushels is considered a good average. Much of the work, including the digging of the potatoes, is done by machinery. The State Agricultural College conducts experiments in potato raising for the benefit of the farmers, and "Potato Schools" are held for the purpose of increasing the production of the crop

and to encourage farmers to apply scientific principles to the production of this extremely valuable crop.

Not everyone knows that thousands of acres of sweet corn are raised to supply the growing number of canning factories of our state. In the raising of this crop, Minnesota is now competing with the old Corn Belt states. Not only corn, but peas, pumpkins, tomatoes, pickles, sauer kraut, and even blueberries are packed. These canned goods rank among the best, and are distributed in many parts of the United States and in Canada.

Minnesota has all the requirements for successful agriculture,—rich farm lands, good roads, good markets, and ample means of transportation to market; and in addition, a most important factor, intelligent farmers. If the farmer needs help, the Agricultural Department of the State University is never failing in its efficient service. For example in the Red River Valley, which is gradually turning from grain farming, a number of farmers near the University Farm School at Crookston have agreed to keep careful records of all the different crops and livestock raised. The object is to find out what crops and what kinds of livestock will give the largest returns. This work is in charge of the University; and after a three-year program has been carried out, many will benefit from the experiments. One finds here sugar beets, potatoes, oats, alfalfa, wheat, and corn combined with sheep, hogs, cattle, and poultry.

Tobacco has been raised in Minnesota for twenty years, and in the central part of the state the acreage for this

crop has lately been doubled. In a recent season a state tobacco expert has instructed farmers in planting. He has worked not only during the day; but many times into the night by the light of automobile headlights, in order that the seed might be put in before the season was too far advanced. The state is always ready to cooperate with the farmer and stands for the latest and most progressive methods.

It is hard to name all of the advantages of the present farming methods used in Minnesota over the old one-crop system. With diversified farming and the animal industries, which go with it, the farmer's income is derived from many sources, so there is much less risk of complete failure. It is amusing to hear a farmer say that he depends on a few dairy cows to take care of his grocery bill, and to hear another say that his pigs pay his taxes.

To a remarkable extent the farmer can supply his own needs and is quite independent of the rest of the world. In the Red River Valley elaborate dinners have been served, where the hosts have boasted that every article of food was produced right at hand, with the exception of the tea, coffee, and salt.

Mixed farming or balanced farming, as it is often called, provides work the year around; whereas wheat alone requires too much labor at certain times, and none at other times. It is not uncommon for the wheat farmer to have to wait months before he can sell his crop, but the diversified farmer receives his income through every

month of the year. However, the greatest advantage of all in the newer farming is that the fertility of the soil is kept up.

To fully realize the great variety of products raised in the state, one should visit the Minnesota State Fair, held every year in St. Paul. Here are displayed animals, grains, grasses, vegetables, and fruits—in fact everything which the state produces. This has already come to be the most important annual agricultural fair in the world, and Minnesota is fast becoming one of the world's greatest farming centers.

Make a list of the Minnesota crops mentioned in this chapter. Add to the list if you can, and also name the animals found on our farms. Why has corn become a more valuable crop than wheat?



COURTESY OF NORTHERN PACIFIC RY.

MONEY MAKERS

CHAPTER XVIII

OUR IRON MINES

Read to see how perseverance sometimes brings results, even against the advice of experts.

When the early Frenchmen explored Minnesota, eager to get rich on its furs, they little dreamed of the great wealth which lay hidden in the ground. In fact it was not until recent times that the iron mines of the state became known. Indians and hunters had sometimes told of finding iron ore in the northeastern part of the state, but nobody paid much attention to such reports.

Shortly after the Civil War there was great excitement in Duluth over false alarms in regard to discoveries of gold in that neighborhood. One of the gold prospectors, less disappointed than his fellows, returned to his home in Duluth with specimens of iron, which he had found near Lake Vermilion. As a result of his discovery a wealthy capitalist of Philadelphia, named Charlemagne Tower, furnished money to open iron mines in this region. The city of Tower bears the name of this far-seeing man.

The mines opened were more than a hundred miles from Duluth on the Vermilion Range. All the mining equipment and other supplies had to be obtained without

the help of a railroad. Pack horses and men carried heavy loads over rough roads. Since there was no means of shipping the iron ore until the Duluth and Iron Range Railroad was completed in 1884, all the ore which was mined was heaped on the ground near the entrance to the mine. The first shipment of iron from Minnesota was sent East, where it found a ready market. The Vermilion Range brought much money to these pioneer mining operators. Later iron was found at Ely, and the railroad was extended to this place. Tower marks the western end of the Vermilion Range and Ely the eastern end.

For some years after the opening of the Vermilion Range, farming, lumbering, and mining were all working together to make Minnesota known throughout the world.

The discovery of the Mesaba Iron Range was due to the untiring efforts of Leonidas J. Merritt, a hardy pioneer. At the outbreak of the Civil War this man walked from Duluth to Fort Snelling to volunteer in defense of his country. The same spirit spurred him on in his search for iron, even against the advice of experts, who said that there was no iron to be found. This region was then made up of dense forests and extensive swamps.

After five years of scouting, often amid great hardships, Merritt felt sure that he had located a bed of ore. In November, 1890, he set up drills which he had obtained in a hurried trip to Duluth. Day after day Merritt and his brothers watched the color of the dirt that came to the surface. Finally the "red dirt," as the iron ore is often called, came to the top. Success had come

at last. This discovery took place some miles west of Virginia, where later Mountain Iron Mine was opened.

The next year Mr. Merritt's brother noticed iron ore clinging to the roots of a tree which had been blown over in a storm. In this way the Biwabik Mine was located. Other great deposits of iron were soon discovered, and in 1892 a railroad was built to the Mesaba Range from Duluth.

The Mesaba Range lies some twenty miles south of the Vermilion Range and extends much farther to the west. It is the most important iron mining district in the world; a good part of the world's supply of iron comes from here. In the history of mining there never was so large an output in so short a time as that from the Mesaba Range.

The Cuyuna Range was the last of the Minnesota iron ranges to be discovered. It is southwest of the Mesaba Range near the city of Brainerd. In 1895 iron ore was located here by means of the compass. As the rocks with which the iron is found have a magnetic attraction, ore is located before drilling is begun. The first shipment from the Cuyuna Range was made in the year 1911. It is certain that there is much iron ore here, but it is harder to mine than on the Mesaba Range. All the three iron ranges are within one hundred and twenty-five miles of Duluth.

Most of the Mesaba mines are of the open pit type; that is, the ore is taken from the surface. In opening such a mine, the first work is the removing of the glacial



COURTESY OF NORTHERN PACIFIC RY.

SHENANGO IRON MINE AT CHISHOLM

drift, which lies above the ore. This process is called stripping and is done by means of immense steam shovels. The drift varies from twenty to two hundred feet in depth. Although the stripping is an expensive process, the open pit mine in the end is worked more cheaply and has great advantages over mines of the underground type. The up-keep is much cheaper, and working out of doors is safer and pleasanter than working in the depths of the earth. On both the Vermilion and the Cuyuna Ranges, the iron is so located that underground mining must be

used mostly. Such mines require a great deal of timber to prop up the underground chambers to prevent their falling in. Water often seeps into the deep mines, making them not only unpleasant but dangerous. Sometimes without warning the underground waters rise so quickly and unexpectedly that the miners do not have time to escape, and are drowned. However, the underground mines can be worked during the winter, giving the miners work throughout the year. The ore is put in stock-piles near the entrance to the mine and is shipped in the spring. Some of the stripping of the open pit mines is done in the winter. In cold weather steam jets help to thaw out the frost, and light charges of dynamite loosen the ground and prevent hard freezing.

Nearly all the ore is shipped just as it is taken from the mine, although some of it is crushed. Seventy per cent of some of the rich Minnesota ores is pure iron. It does not pay to ship the low grade iron ores without first removing some of the sand and clay from them. The places where this is done are called concentration plants. At Coleraine on the western end of the Mesaba Range is the largest plant in the world. In washing the ore, six thousand gallons of water a minute are used. The water carrying the impurities looks like a river of red paint. It runs into a lake, one end of which has been filled with the deposit. If the low grade ores can be prepared cheaply enough, they will supply iron for many years to come.

Let us make a visit to the Mesaba Range so that we

may see for ourselves just what our wonderful iron mines are like. The trip along the range may be made by rail, trolley car, or auto. We shall go by auto, so that we may stop to see anything which interests us. Now, if any of us expect the range to look like a range of mountains with great towering heights, we shall be disappointed. The country here is made up of rolling land, not very high, with now and then a hill. At the eastern end of the Mesaba Range is Biwabik, where one of the first mines was opened. We shall travel from here to Hibbing, the last large town at the western end. The towns are close together, for it takes many people to carry on the business of the mines, and all must have homes. On account of the revenue from the mines, the towns have built wonderful schools and libraries, also very fine roads.

Now we are passing through Eveleth. We are told that towns of several thousand people have been moved a distance of a half mile to a mile in order to get at the rich deposits of iron underneath. Eveleth is one of these and Hibbing another, the latter being known as "The town that moved over night."

We go on to Virginia, the "Queen City of the Iron Range," a city which has twice been wiped out by forest fires. Each time the enterprising people have built it up finer than ever. Within eighteen miles of the city courthouse there are over fifty iron mines.

Virginia is not only a great mining center; but it still has big lumber mills, from which white pine lumber is

widely distributed. As we watch the enormous logs entering the mills, we think of the years it took for the trees to reach this great size. Each one probably represents a hundred years of growth. The lumber industry is already disappearing from Virginia, and one regrets the loss of the great white pine forest which once covered this region.

Our next stop is at Chisholm, another town which was entirely destroyed by forest fires and which has since been

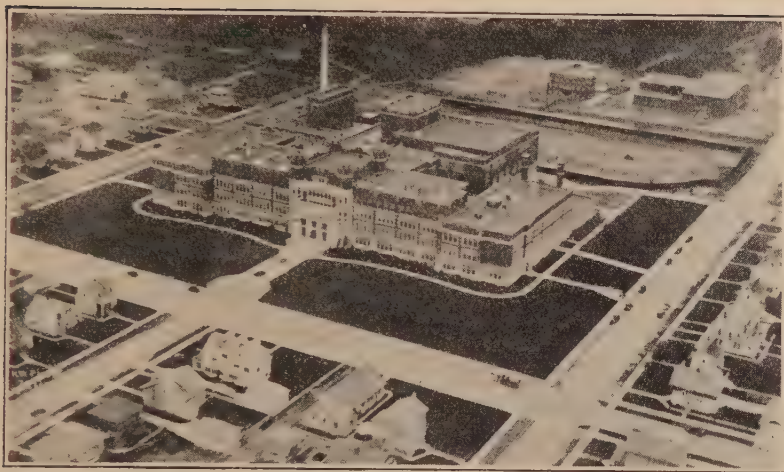


PHOTO BY GALLAGHER, DULUTH

IRON ORE CARS—A FAMILIAR SIGHT ON THE IRON RANGES OF
NORTHERN MINNESOTA

re-built. There are fine schools here also. We have heard that an underground iron mine is located at Chisholm, and we are anxious to visit it. In the evening, after the miners are through with their day's work, we are allowed to go down into the mine. First we dress ourselves in miners' suits, which are kindly furnished by the mining company. Then by means of many ladders, one right below the other, we descend over two hundred feet into the earth. Water is dripping constantly in the shaft, and we are told that the recent rains have increased the water in the ground. At the lowest level, we see a stream of clear, cool, running water. Our guides show us a device for shutting off the water when there is danger of the mine being flooded. They tell us that sometimes the water has risen four feet.

Although the mine is partly lighted by electricity, each of us carries a candle or lamp. The miners wear the lamps on their hats. Heavy timbers line the tunnels, which are so low in some places that we are obliged to stoop. While we are in the mine, a slight fall occurs. No one is struck by the falling ore, but it is enough to show us what might happen. One of our guides lets us take a pick and with this we break off some of the ore from the wall of the mine. Now we can say that we have mined iron. Our shoes are covered with red mud, which looks like paint and which we discover later is very hard to get off. In many places thick white mold spots the ground and walls. The air is cool, and the dampness makes it seem cooler than it really is. We come up by



HIBBING HIGH SCHOOL—LARGEST IN THE WORLD

long slanting passages, using ladders every now and then. The dangerous life of the miner does not appeal to us, and we are glad to be in the fresh air again.

Early in the morning we go on to Hibbing, "The Iron Ore Capital of the World." This is the chief iron producing center of the world. Hibbing is also called "The Richest Village on Earth." The people claim that they have the largest high school building in the world. It is really wonderful and we admire its auditorium and its swimming pool. On the walls are paintings, which are beautiful works of art.

The state leases its iron lands to mining companies and receives a royalty on every ton of ore mined. In this way the school fund has been greatly increased. Of course the mining companies pay very large taxes, and the range

towns have plenty of money to spend for schools and various improvements. Their schools are unmatched by any in the country.

We can hardly wait to see the Hull-Rust-Mahoning mine, the largest open pit mine in the world. On our way we pass a new mine which is being stripped. A great clam-shell steam shovel takes up five tons or more of the sandy glacial drift and swings it into a dump car to be carried away. Empty cars keep coming up to the shovel, for it would mean a waste of time and money if the shovel had to stop. In all the mining operations we see only the most modern equipment, very well cared for. Every captain of industry knows that in the end it pays to use the best and most up-to-date tools and machinery.

Here is a building where many chemists are working for the mining company. They test the ore so that, when orders come for a certain kind, they can send just what is required. In the samples to be tested, we see that the ore has been crushed to powder almost as fine as flour.

At last we have reached the world-famous Hull-Rust-Mahoning mine. Here two mines have been joined and form one huge chasm, which is one mile wide and fully a mile and a half long. We gaze at the enormous pit, the walls of which rise in terraces made by the removal of the ore. The coloring grades from yellowish brown through various shades of red to black. One of our party, who has visited the Grand Canyon of the Colorado, tells us that this mine resembles the canyon, and that the coloring here is fully as brilliant. It is truly a wonderful picture.

We are allowed to ride around the mine in flat cars to get a close view of the miners at work. The ore is soft and crumbles easily, so it can be dug up by great steam shovels and loaded directly into steel cars. This makes the cost of mining very low. Here and there in the mine are safety houses made of one-fourth inch sheet steel. We are told that when blasting is going on, forty men have sometimes taken refuge in one little house. At first there were underground mines here. We should think that the miners would be glad to work in the sunshine, rather than in tomb-like caverns under the earth. The ore is sent to Duluth and shipped from there to places on the Great Lakes like Cleveland, Ohio, and Gary, Indiana, where it is made into steel. Much of it goes to Pittsburgh, also. For some years Duluth has had a steel plant, but it does



STEAM SHOVEL AT WORK—HIBBING

not make steel on such a large scale as do these more eastern cities.

Some of the mining officials explain to us why the great output of Minnesota iron can be made so cheaply. As we have seen, the cost of mining is low. The railroads, leading from the range towns to Duluth, run down grade; and this, together with water transportation on the Great Lakes, gives cheap freight rates. Wonderful methods of loading and unloading the iron ore vessels, which we shall see at Duluth, help to lessen the cost. All these reasons combine to make possible a very low price on Minnesota iron in the great steel centers.

Information is received at Hibbing of the Lake Superior boats which will load in the next twenty-four hours—how much each carries and the grade of ore demanded. With the help of the chemists, ore can be furnished which fills the requirements exactly. We are told that the black ore is best, because it contains the most iron.

Our mines have attracted students and authors, as well as engineers and scientists, from all parts of the world. We realize that one must see the mines to understand the immense scale of the mining operations. As we leave Hibbing and the Mesaba Range, we feel that we have enjoyed one of the most wonderful sights not only of Minnesota, but of the whole United States.

Name the three iron ranges of Minnesota and the best known city of each. Do you know the three leading iron states?

CHAPTER XIX

DULUTH—MINNESOTA'S INLAND OCEAN PORT

In 1871 Senator Knott of Kentucky made a speech before Congress in which he ridiculed the young city of Duluth. He said that he could not find Duluth on any of his maps. Besides this he spoke sarcastically of the boundless commercial resources of the city. Senator Knott lived to see Duluth's wonderful commercial and industrial development and acknowledged that the joke was on him. As you read, find out not only why Duluth is an important city, but also why it is likely to be much more important in the future.

"At the head of Lake Superior will grow up one of the largest cities, perhaps the largest on the continent,"—these words were spoken more than fifty years ago by a far-seeing statesman. The following similar prophecy was made by another statesman of the same period, "At the head of Lake Superior there will be seen a city rivaling any which in ages gone by enjoyed the commerce of the East." Let us see why, at that time, such predictions should have been made of a small, unimportant town.

Those who have studied the causes which have made other cities great, find that the growing city of Duluth possesses many of these. At present it ranks third in population in the state. First of all, Duluth is wonderfully located at the extreme western end of the Great

Lakes. Not only is the farthest inland point in shipping always very important, but in all the world there is no other inland waterway which can compare with the Great Lakes. They give trade the advantage of very low freight rates into the heart of the continent.

Many a city owes its existence to its location at a place where a water route ends, and a land route begins. Such a break in transportation must have a town to handle the goods which have to be transferred at this point. The size of the town depends largely on the quantity of goods carried. Very near Duluth three bulky products have been produced in such quantities as to bring much shipping to this point. Not long ago this region was heavily forested, and Duluth became a great lumber port. Lumber has declined, but wheat from Minnesota and North Dakota is still shipped from there in great quantities. However, it is the ore from Minnesota's iron mines which furnishes by far the greatest part of Duluth's freight. This has caused it to change from an obscure town to one of the greatest shipping ports of the world. The city is also a great distributing point for coal from the East.

If Duluth's harbor had not been able to handle this great amount of freight, it would not have become the distributing center for the whole Northwest. The freight would have gone to other lake ports. The harbor, covering nineteen square miles with a dock frontage of forty-nine miles, lies behind a long strip of land called Minnesota Point. This sand spit, as such a formation is called, is seven miles long and only a few hundred feet wide.



PHOTO BY GALLAGHER

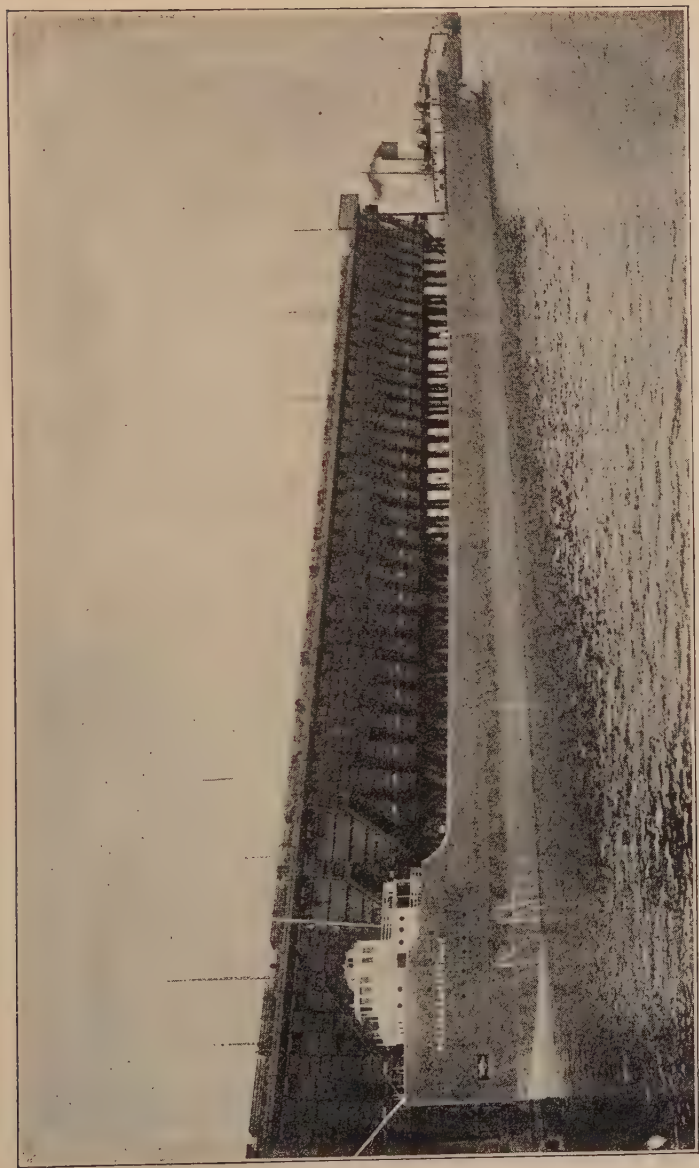
DULUTH HARBOR SHOWING MINNESOTA POINT AND BOULEVARD DRIVE

Protecting the harbor from wind and wave, it is a perfect breakwater. The current of the St. Louis River, which enters Lake Superior at Duluth, meets the counter current along the shore of the lake, causing great deposits of sand. With the help of the waves through ages, this strip has been built up.

Nowhere in the world is bulky freight handled more speedily and cheaply than at Duluth. The type of boat which carries the iron ore is seen nowhere else in the world. It was invented for that purpose and is adapted to lake traffic in every way. The standard capacity for these ore boats is 12,000 tons, although some of them

carry larger cargoes. When we hear that this is eight times the capacity of a freight train of thirty cars, we realize what an enormous load it is. The great ore docks, nearly half a mile long, are fireproof, being built of steel and concrete. The ore pockets in the docks are filled by the cars which we saw being loaded at the iron mines. These cars pass along a track at the top of the dock, and, when the trap doors in the bottom of the cars are opened, the ore which they contain passes into the pockets, from each of which extends a spout. The spouts are lowered into the ore boats, the pockets are opened, and the ore runs down through the spouts so rapidly that a large boat is filled in less than half an hour. Several spouts work at the same time. From one dock five large boats can be loaded at once.

Duluth's harbor is also well equipped to handle great quantities of wheat, for the elevators can store over thirty million bushels. When a boat is to be loaded, belts carry the wheat from the storage bin to scales. After it has been weighed, it passes on to another bin and is shot through a spout into the boat in much the same way that the ore is loaded. If we should go along with the ore and the wheat, we could see how the cargoes are unloaded. Many ore and grain boats return from the East with loads of coal. A great grab bucket, scooping up ten tons at once, swings it into the dock. Duluth has twenty-four of these coal docks, all built of steel and concrete and equipped with the most modern machinery. Over eleven million tons of coal can be stored here. It is interesting



COURTESY OF DULUTH, MISSABE, AND NORTHERN RY.

ORE DOCK AT DULUTH AND BOAT LOADING

to watch the loading or unloading of the freighters, for the machinery seems to work with human intelligence.

Superior, Wisconsin, on the other side of the St. Louis River, and Duluth form one port. For many years this port has stood second only to New York in tonnage. Other ports may surpass it in the value of their shipments, but not in bulk. This is especially remarkable because the Duluth-Superior harbor is closed several months of the year by ice.

Cheap water transportation and ample railroad connection, combined with an excellent harbor, make a port of the first order. Coal brought from the East and water-power at hand, together with abundant materials from the rich surrounding country, equip Duluth for manufacturing. Here is a list of advantages hard to be matched by any other city. No wonder the student of geography has faith in Duluth's future. When a deep waterway is completed from Duluth to the sea by way of the Great Lakes and St. Lawrence River, the Northwest can ship its grain and other products directly to Europe at a great saving in the cost of transportation. Ocean steamers can then go from Duluth to any port in the world, and Duluth will become a real ocean port. Then we may look for the prophecies made over half a century ago to be fulfilled.

For many years the Aerial Bridge was one of the sights of Duluth. The only natural opening from the harbor to the open lake is on the Wisconsin side. In order to have a passage convenient to Duluth, a canal was cut across

Minnesota Point. Lighthouses guard this passage and make it safe for sailors at night. On account of the heavy traffic through the canal, it was hard to build a bridge which would in no way interfere with shipping through this passage. The United States Army engineers rejected several plans. Finally the city engineers of Duluth offered the plan which was used. It was taken from a bridge in France. Since then other bridges have been made on the same plan. However, the Duluth Aerial Bridge was the only one of its kind in the United States. The canal was spanned by a steel arch, which was high enough to allow the tallest masts to pass under it. From this arch a car was



AERIAL BRIDGE

suspended. No visitor to Duluth missed crossing the Aerial Bridge. If the bridge was under repair, the canal was crossed by ferry boat.

The Aerial Bridge has now been replaced by a "lift bridge." The change was made to speed up traffic, which was often delayed with the old bridge. With the new bridge, passing to and fro is continuous, except when the lift is raised to permit the passing of a ship. Much more rapid transportation is now possible. Although the cost would be heavy, many think that in time the demands of traffic will force the cutting of a tunnel under the channel.

Duluth is becoming more and more a manufacturing city. Not only has she coal for power, but eighteen miles from the city, up the St. Louis River, is an enormous electric power plant. It is well worth a trip to see the immense waterfalls, which have been harnessed and are furnishing power to light the city and to drive her machinery.

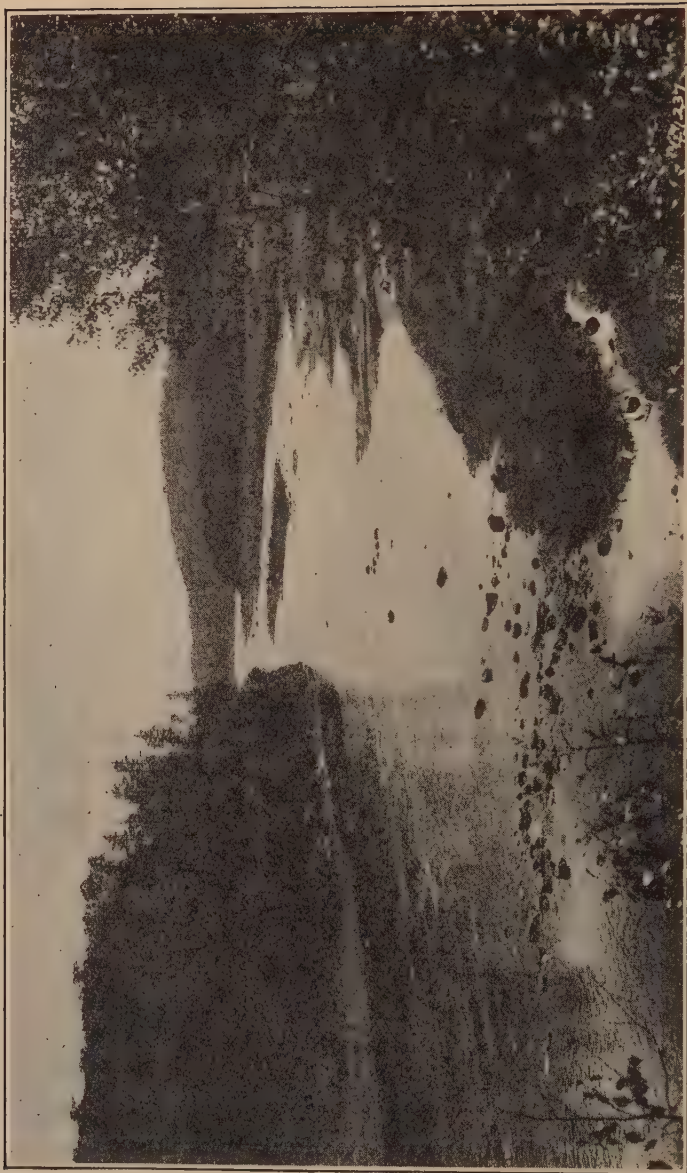
Among Duluth's manufactures wood products have long been important. Textiles, both woolen and linen, are also made. Wool raised on farms near the city is of high quality and partly supplies the raw product required by the factories. Here, it is said, is the only place in the state where matches are manufactured. Iron and steel and cement manufacturing are very important. The United States Steel Company has invested many millions of dollars in its Duluth plants, where steel is made from Minnesota iron. From the steel many articles are manu-

factured. Within the city limits is Morgan Park, a model village, where the steel workers have homes. Nearly one hundred ovens supply the coke used in smelting the iron. Of course the coal to make the coke comes from the mines of the East by way of the Great Lakes. The slag, which is made up of the impurities in the iron ore, is used in making cement.

Duluth is said to be the greatest primary flax market in the world. A primary market handles the products grown near by. It markets the flax of Minnesota and North Dakota, and beautiful rugs are made here from the flax fiber.

The rich grazing lands near Duluth encourage dairy farming, and several creameries have been established, that ship their products to many parts of the country. Flour milling is an important line of industry here. Due to the long days with no droughts, vegetables yield large crops. The farm exhibits at the State Fair, from St. Louis County, in which Duluth is situated, have already become famous. It is easy to see that the rich and prosperous farming region which surrounds Duluth is another factor in her development.

Delightfully cool summer weather adds to the attractions of Duluth and has won her the name of "The Summer City of the Continent." The summer tourist enjoys Duluth's many wonderful parks and drives. Among the fine buildings to be seen, are those of the State Teachers College. The city rises in terraces from Lake Superior and stretches over twenty miles along the shore, so that



CURTIS—FOR NORTHERN PACIFIC RY.

ST. LOUIS RIVER NEAR FOND DU LAC

someone has described Duluth as "twenty miles long, a mile wide, and half a mile high." The Boulevard Drive, sometimes called the most beautiful drive in the state, gives a magnificent view of the harbor. It follows an old beach line of the lake, now more than five hundred feet above the surface of the water.

No visitor must fail to see Fond du Lac, located where the St. Louis River empties into Lake Superior. The name means "end of the lake." In 1679 this historic spot was reached by that noble Frenchman for whom the city of Duluth was named, and later a great fur trading post was established here by the Northwest Company. For a time this was Minnesota's leading trading post. The visitor to Fond du Lac today sees a huge boulder on which is a tablet giving a brief history of the trading post. The tablet was placed here by the Daughters of the American Revolution. Little did those early fur traders dream of the city which would one day mark the head of the lake.

Every year thousands of people come to Duluth for business or pleasure, or both. All these visitors agree that Duluth, "the Zenith City," is different from other cities. In every way it is a wonderful city.

Make a list of the advantages of Duluth for commerce. The deep waterway from Chicago to the Gulf of Mexico by way of the Calumet, Illinois, and Mississippi Rivers will furnish cheap transportation through the Panama Canal and make Chicago the steel market of the world. Explain what bearing this will have on the growth of Duluth.

CHAPTER XX

LAKE SUPERIOR

It would be impossible to estimate the value of the Lake Superior route to Minnesota. In reading this chapter, decide where this value lies.



THE SHORE OF LAKE SUPERIOR

Although Minnesota cannot claim Lake Superior as her own, 2514 square miles of the surface of this lake lie within the boundaries of our state. In the early days

the Mississippi River was the most important water route to Minnesota, but many years ago the approach by way of Lake Superior became more important. It would be impossible to measure the value to Minnesota of the Great Lakes route. The millions of tons of freight, which leave or enter the state by this waterway, represent the saving of millions of dollars. Rates are lower by water than by any other method of transportation.

Many dollars are saved in shipping coal by water rather than by rail from the eastern mines to Duluth. The rates for iron ore and wheat are also much lower than by rail. One seldom hears of boat shipments of fresh vegetables from Duluth to the East. Although unusual, such shipments have been made. Cargoes of potatoes and cauliflower have reached New York City in good condition by an all-water route; the freight charges by water are less than half what the all-rail charges are.

The advantages of our location on Lake Superior are not all commercial by any means. Such an immense body of water is a great storehouse of the heat of summer. During the autumn and winter this heat is gradually given back to the land. In the spring the lake warms up slowly, and the season advances without sudden changes, which are very harmful to crops. The summers are free from scorching heat waves. The tempering of the climate by this great water mass has had much to do with the successful farming in St. Louis and Lake counties, and also makes the towns near its shores much pleasanter places in which to live.

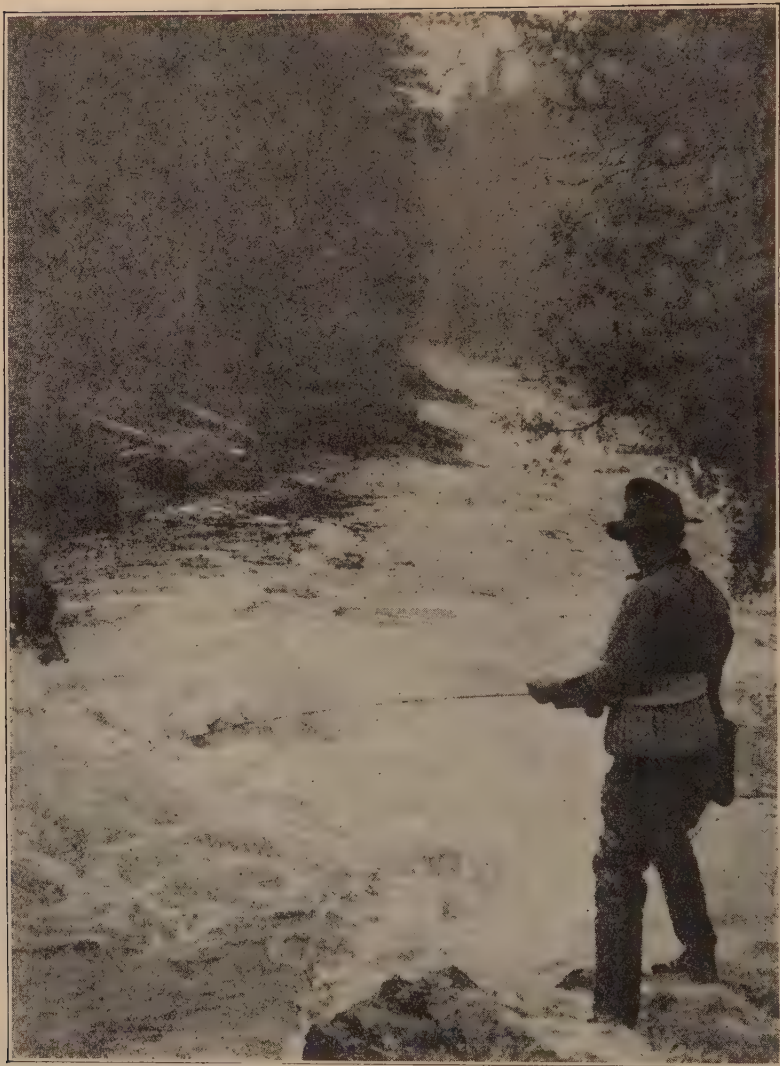


PHOTO BY KENNETH M. WRIGHT

MANITOU RIVER ON NORTH SHORE OF LAKE SUPERIOR

Lake Superior is the largest fresh water lake in the world, being 380 miles long. This means that it is considerably longer than the greatest distance across the state from east to west. The greatest width of the lake is 160 miles. Its area of over 31,000 square miles is about the same as that of South Carolina. In its deepest parts the lake is over 1,300 feet deep. Since the shore is about 600 feet above the level of the sea, the lowest depths must be 700 feet below the level of the sea.

It is impossible to tell exactly how Lake Superior and the other Great Lakes were formed. However, it is certain that they have gone through many changes in acquiring the forms shown on our maps today. The present forms came into existence at the end of the Glacial Period. Some people think that the lakes were made in old river valleys, which were greatly enlarged by the work of the ice.

Around Lake Superior is a high rocky rim, sloping steeply to the water. Down this slope two hundred small rivers pour their waters into the lake. These rivers are generally not large enough or smooth enough for boats, but their falls and rapids are capable of supplying much waterpower. A great deal of this is still unharnessed, but in time many power plants will probably be built here. These streams are remarkable for brook trout, which grow to a large size in the cool water, making this region a fisherman's paradise. The largest of these streams is the St. Louis River, at the head of Lake Superior. It is often spoken of as the beginning of the St. Lawrence.

Already the falls of this river furnish much waterpower.

The lake shores are very rocky. At places on the north shore, cliffs rise a thousand feet above the water. The scenery is grand, much like that which one sees on the rock-bound coast of the state of Maine. At the water's edge the waves, beating for ages, have washed away some of the softer rocks, forming caves, which can be explored in a small boat.

On the north shore grow great quantities of the finest red raspberries and blueberries in the country. On account of the cool weather the berries last here after they are gone in other parts of the state.

There are many islands in the lake, the largest of which belongs to the United States. In fact, the greater part of Lake Superior belongs to the United States, although the northern part is owned by Canada. The largest island is Isle Royale, a great summer resort, which is part of the state of Michigan.

The fisheries of the lake are quite important. Herring, white fish, lake trout, pickerel, and sturgeon, as well as other kinds of fish are caught. In catching the fish, nets are used mostly. Great numbers of gulls skim gracefully over the waters of the lake. These birds are useful as well as beautiful. Preferring dead fish as their food, they keep the shores free from such refuse.

The water is always clear, and even in summer it is icy cold. If the fishermen fall into it, they are often chilled and drowned before help can reach them. The lake sometimes freezes around the edges; but it is never entirely

frozen over, because of the great quantity of water, which changes its temperature very slowly. The water is so clear that objects which are more than twenty feet below the surface may be plainly seen. On account of its remarkable purity it is good drinking water.

Usually Lake Superior can be navigated for eight months in the year, from the middle of April to the middle of December. In the late fall storms make the lake so unsafe that insurance companies will not assume the risk at that time. However, some captains run their boats into December. Every spring it is quite an event when the first boat comes through, and newspapers always make mention of it.

The sailor's life on the lake is a hard one. The storms are as severe as those on the ocean; and the fogs, which may come at almost any time, are much dreaded. Lighthouses have been built along the banks, but in the fog the lights cannot be seen. One writer has said that in summer "Dame Superior" wears her fogs almost as a Turkish wife wears her veil. Snowstorms are also dreaded and may occur any time from September until late in June.

In the summer time many passenger steamers ply the water of the Great Lakes. The trip from Duluth to Buffalo gives one a delightfully restful vacation, and shorter trips may be taken on Lake Superior itself. Each year the lake gets more and more popular as a summer resort. Altogether Minnesota benefits greatly by bordering on Lake Superior and will benefit still more when

the "Great Lakes and St. Lawrence Waterway" is completed. Then boats will carry passengers and freight from Minnesota to the Atlantic. Any part of the world may be reached without changing boats. In time, the cities on Lake Superior will doubtless be classed among the world's greatest ports.

Which explorers of Minnesota came by way of Lake Superior?
Why is Lake Superior an ideal spot for a vacation?



COURTESY OF D. LANGE

CHAPTER XXI

MINNEAPOLIS—THE METROPOLIS OF MINNESOTA

Read to find out the reasons which have made Minneapolis the largest city in Minnesota.

Long after Father Hennepin discovered and named the Falls of St. Anthony, only Indians lived where the great city of Minneapolis now stands. In the same year that Mr. Sibley came to Mendota to engage in the fur trading business, the two Pond brothers arrived at Fort Snelling. They had come to the western frontier for the purpose of teaching the Indians. The Indian agent at the fort sent these young men to teach the Indians how to plow. They were welcomed by Chief Cloud Man, who lived near Loon Lake, now Lake Calhoun, in the heart of the present city of Minneapolis. Because it would be pleasant to hear the loons at night, the chief advised them to make their home on the shores of the lake. Their cabin was placed on a bluff overlooking the lake. It had a ceiling of slabs from the government mill at St. Anthony Falls, a window given by the Indian agent, and a chimney made of boulders from the shore of the lake. The pelts of wolves which they had killed made the floor warm and comfortable.

Here these good men lived and worked with the Indians, teaching them many useful things. By adapting our letters to the Sioux language, they made what was called the "Pond alphabet." This with the beginnings of an Indian dictionary made by them was very useful to other missionaries. A bronze tablet now marks the spot where the Pond cabin stood.

Another worker among the Indians was the Reverend J. D. Stevens. He labored with one of the Pond brothers near Lake Harriet, erecting the first school within the limits of Minneapolis. Near this lake there has been placed a tablet in his memory.

You remember that in the year 1821 a rude sawmill was built at the falls on the west bank of the river to cut the logs used in building Fort Snelling, and that two years later a government flour mill was established here. Even in very early days the people of Minnesota, particularly those connected with Fort Snelling, realized that a great city would some time grow up at St. Anthony Falls. The government land reserved for the fort was all on the west side of the river, while the east side belonged to the Indians. Knowing its great future value, many watched eagerly for the chance to lay claim to this land, particularly the part bordering on the falls. On a summer night in 1838 the news reached Fort Snelling that a treaty with the Indians had been approved, by which this land was ceded to the government. The next morning the major, then in command of Fort Snelling, crossed the river to stake out a claim. When he reached the place



COURTESY OF MINNESOTA HISTORICAL SOCIETY

ST. ANTHONY FALLS LOOKING WEST FROM HENNEPIN ISLAND, 1851.
THE WATER IS SMOOTH BECAUSE THE PHOTOGRAPHIC PLATES
AT THAT TIME WERE SLOW. A MINUTE WAS NEEDED WHERE
NOW ONE-FIFTIETH OF A SECOND IS SUFFICIENT

near the falls, what should he find but a shack already built on the very spot he had planned to claim. A gentleman stepped out of the shack and politely invited the major to take breakfast with him. This was Franklin Steele, the brother-in-law of Mr. H. H. Sibley, and the storekeeper at the fort. By building the shack during the night, he had secured for himself the valuable water-power.

This was the first building in what was later called St. Anthony, and Franklin Steele has been named "The First

Citizen of St. Anthony." Steele held on to his claim, although the government did not throw the east bank of the river open to settlement until 1847. In that year many settlers rushed to stake out claims. The next year, when the government offered the land for sale, Steele and all the other squatters bought their claims and became lawful owners.

In the year 1847 Steele built a sawmill on his land, and the town of St. Anthony grew up around it. Lumbermen, storekeepers, and farmers came here to make their homes. Ard Godfrey, a partner of Mr. Steele in the logging business, who afterward became the first postmaster of St. Anthony, built one of the first houses. This is still preserved in Chute Park in Minneapolis. From the very beginning the town extended the open hand to strangers with the same spirit for which Minneapolis has always been noted. A house large enough for two families was built near the river. This was the "Strangers' House," and newcomers were welcome to make their home here until their own houses were completed.

A road connected St. Anthony with St. Paul. Starting in the summer of 1849, a two-seated open wagon drawn by a span of horses made daily trips between the two places until winter set in. The road was quite rough and became very bad in rainy weather. It was not unusual to meet wolves and bears on the way.

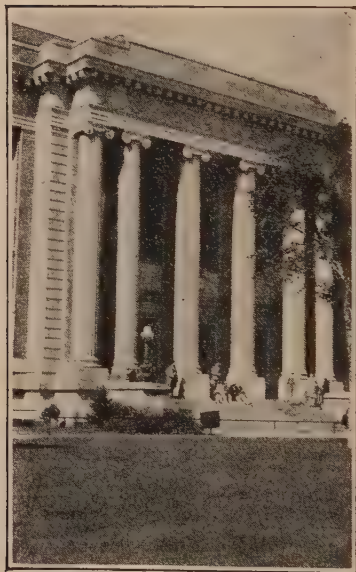
In 1849 the War Department leased the old government mill on the west bank of the river to Robert Smith, a Congressman from Illinois, and later allowed him to

purchase a quarter section bordering on the falls. The next year John H. Stevens was permitted to occupy the land adjoining Smith's claim, also on the river front, on condition that he would run a ferry across the river at the falls. This ferry was to be free to the government. The west side of the river, where these claims were located, was still part of the Fort Snelling reservation.

Mr. Stevens built his home near the river just above the falls, almost on the spot where the Great Northern railroad station now stands. The mosquitoes surrounded the house in swarms and, in spite of netting on the windows and doors, caused great annoyance, particularly at night. Captain Tapper, who helped run the ferry, and who also assisted in clearing the land around the house and in preparing it for farming, lived with the Stevens family. One morning just before daylight Captain Tapper, after spending a sleepless night, sought refuge from the mosquitoes on the hill behind the house. Wrapping his blankets around him, he was just falling asleep when he felt the hot breath of an animal in his face. Instantly wide awake, he found himself surrounded by a pack of wolves. Uttering a yell, which Mr. Stevens said drowned the roar of the nearby waterfalls, he fled for his life.

St. Anthony became a thriving village and by 1851 had as many as six hundred people. This was now one of the leading towns of the territory, and when the University of Minnesota was created in that year, the Legislature decided that it was to be located at, or near, the Falls of St. Anthony. Franklin Steele gave some lots for a build-

ing, some money was subscribed, and a few books were given to start a library. A small wooden building was constructed, in which a preparatory school was opened, as none of the students were yet prepared for college.



COURTESY UNIVERSITY OF MINNESOTA
NEWS SERVICE

LIBRARY, UNIVERSITY OF MIN-
NESOTA

The present campus with its beautiful oak trees, called the "Oak Openings" of the original forest, was purchased in 1854.

Although the University started with much promise, hard times held up the sale of lands which the government had assigned for its support, and the institution was closed. Better times came, and the University was reopened. The first commencement was celebrated in 1873 when two students were graduated. At the present time with its handsome buildings and thousands of

students, it is hard to realize these small beginnings.

As early as 1851 a number of the citizens of St. Anthony crossed the river and staked out claims, building shanties and sometimes plowing the land. They did not wish to lose a good thing almost at their door. In the following year, when the government reservation was



COURTESY OF UNIVERSITY OF MINNESOTA NEWS SERVICE

FOOTBALL TEAM IN ACTION, UNIVERSITY OF MINNESOTA

reduced, there was a mad rush from St. Anthony to lay hold of the best land. A settlement, which later became the city of Minneapolis, grew up around the Stevens claim, and John H. Stevens is known as the "Father of Minneapolis." He laid out the first street and named it Washington. For many years this was the main street of the town.

Three years went by before these squatters could prove up and receive titles to their claims. When the lands were sold, they came to the sale armed with guns. Just as when Mr. Sibley had bought the homes for the early settlers of St. Paul, no speculator dared put in a bid. This land was sold at about \$1.25 an acre, but was worth ten times that sum and would have brought much more in the open market.

The settlement on the west side of the river had no name. Half in joke "All Saints" was suggested. This name was used, although the citizens disliked it. Finally one of them, Mr. Charles Hoag, proposed Minnehapolis, in which he combined the Indian word for laughing water, "Minnehaha," with the Greek word for city, "polis." In this way a beautiful and appropriate name was made. At first it was spelled with an "h," but this letter was never pronounced and was later dropped. The choice was a happy one and soon came into general use, to the satisfaction of all.

In the home of the "Father of Minneapolis" many plans were formed for the welfare of the town. Hennepin County was organized in it, and Indian councils were held

there. There also was started the Hennepin County Agricultural Society. Long before Minnesota became a state, this society held a fair which gave promise of the great State Fair of later years. It is interesting that the members of this society put on record their opinion that Minnesota was a good stock-growing country. Before long farmers began to discover that they could raise hogs profitably, and were encouraged by Mr. Stevens and other members of the Agricultural Society to believe that wheat would prove a paying crop in Minnesota.

The Stevens house now stands in Minnehaha Park, where it is kept as a reminder of those early times. In 1896 it was hauled there by the school children. Some years before that time it had been moved from its original location. The house bears this inscription:

STEVENS HOUSE

First Frame House Erected on the Site of Minneapolis,
West of the Mississippi River.

Occupied By Col. John H. Stevens, Aug. 6, 1850—
Moved to this Park May 28, 1896.

In the year 1855 the first bridge ever built across the Mississippi was opened. It was a wire suspension bridge connecting St. Anthony and Minneapolis, and was made under the direction of Franklin Steele. One day in January, 1855, the two houses of the Minnesota Legislature adjourned and came up from St. Paul to attend the exercises at the opening. By paying a toll of three cents, a person was allowed to cross the bridge, and, by paying



INSCRIPTION ON STEVENS HOUSE, MINNEHAHA PARK, MINNEAPOLIS

five cents, one might go over and return. The bridge was a real wonder at that time, since it was the first of its kind ever made. This bridge has since been removed.

By this time the many visitors to Minnesota had spread abroad tales of her beautiful scenery and wonderful resources. Wealthy people who came to St. Louis often took the trip up the river to see St. Paul and St. Anthony. These towns became fashionable summer resorts for wealthy people, particularly for people from the South.

In the splendid steamboats of the time the journey on the Mississippi could be made very comfortably and pleasantly. In 1857 a large hotel was built in St. Anthony to attract these summer tourists. Some people came for pleasure, and others came in search of good investments; many others came hoping to regain their health, for the Minnesota climate was considered very beneficial. Not until 1862 did the railroad come to St. Anthony. It was a proud day for the whole state when the first train made the ten-mile run from St. Paul to St. Anthony.



COURTESY OF MINNESOTA HISTORICAL SOCIETY

SUSPENSION BRIDGE—MINNEAPOLIS—COMPLETED IN 1855. THIS WAS THE FIRST BRIDGE EVER BUILT ACROSS THE MISSISSIPPI RIVER. IT CONNECTED MINNEAPOLIS AND ST. ANTHONY. IT HAS SINCE BEEN REMOVED

At first St. Anthony was more important than Minneapolis, but some of the leading citizens of the former place moved across the river with the thought of bettering themselves. Minneapolis was incorporated as a city on February 26, 1867. The new city outstripped the old in trade and manufacturing as well as in population. For years the union of the two had been expected, and finally in 1872, by an act of the Legislature, the two cities became one under the name of Minneapolis. Since that time St. Anthony has been called East Minneapolis. Sometimes the name, Dual City, is still seen, reminding one of the two cities which were merged into one.

You have seen how the Falls of St. Anthony caused the settlement of Minneapolis and really made the city. Soon after the citizens began to use the waterpower, they realized that the falls were not permanent. Even long before the red man lived in Minnesota, the rushing river had scraped off all the glacial drift from the limestone bed of the stream, leaving the rock bare. The falls were at one time located at Fort Snelling, and here the water below the waterfall began to gnaw into the soft white sandstone which lay under the harder limestone. Great projecting shelves of limestone were left over which the falls swept. Time after time the limestone broke, and great blocks fell at the foot of the falls. More sandstone was exposed on which the waters at once began to work. In this way the Falls of St. Anthony have gradually moved nearly four miles upstream.

In 1680 Father Hennepin not only made a sketch of the falls, but described them so clearly that their exact position is known. Eighty-six years later Jonathan Carver also gave an accurate description. By comparing the accounts, it has been found out that in that time the falls receded nearly four and three quarters feet every year. Since Carver's time the movement has been more rapid, about six and three quarters feet yearly. It is now known that, if the Falls of St. Anthony had receded another mile, they would have disappeared. If this had happened, where would the metropolis of the state have been? Certainly not where it is now.

In the late sixties, the ambitious young city of Minneapolis had a great scare. An immense section of the limestone ledge under the falls fell. Years before this, there had been talk of reinforcing the natural rock, but now the cry of "Save the falls" was heard in Washington. As a result, the United States Government spent more than half a million dollars in helping the cities of Minneapolis and St. Anthony to construct a huge dike of masonry and concrete from shore to shore behind the falls. A so-called apron was built, over which the waters slide. By the work of several years the falls were saved, but their far-famed beauty was gone.

It was once thought that St. Anthony Falls would furnish waterpower enough for all the factories that would ever be built there. The waterpower developed has been rated at 57,000 horsepower, but this is not nearly enough to supply the needs of the city. Power is obtained from



COURTESY OF MINNESOTA HISTORICAL SOCIETY

EARLY SAWMILLS OF MINNEAPOLIS ERECTED IN 1859—SUSPENSION
BRIDGE IN THE DISTANCE AT THE LEFT

St. Croix Falls in Wisconsin, and from Coon Rapids on the Mississippi.

At first the lumber used in St. Anthony was supplied by Stillwater, for lumbering was well established in the St. Croix Valley before Mr. Franklin Steele built his sawmill on his claim at St. Anthony Falls. Before long the town of St. Anthony became widely known as a lumber town and could furnish all that was needed. The logs which were sawed here came from the great pine forests of the upper Mississippi, the nearest forest being on the Rum River, a tributary of the Mississippi. Since these pine lands were still owned by Indians, the lumbermen

had the rather difficult task of bargaining with them for the timber which they wished to cut. In 1848 the first logs were sawed at the St. Anthony mill. These had been bought from the Indian chief named Hole-In-The-Day. As he received only a half dollar for each tree, it is easy to see that the white men had made a good bargain.

By 1850 lumbering had gone ahead of fur trading and had become the chief industry of the state. The rapidly developing prairie regions of Illinois, Iowa, and other states to the west and south demanded a great deal of lumber for their growing cities and farms. Soon Minneapolis with its waterpower became the greatest center of the lumber business in the Northwest. The best boards could be bought at sixteen dollars a thousand feet.

The development of flour milling in Minneapolis came later because farming was slow in getting started in Minnesota. The early settlers labored under the false notion that the growing season was too short for the common grains to ripen. To supply a grist mill opened near Steele's sawmill in 1853, wheat was brought up the river from Iowa to St. Paul, and from there it came by wagon to St. Anthony. A little later a three-story flour mill was built on Hennepin Island.

In the year 1862 the first shipment of flour was made from Minneapolis. For fear that Minnesota flour might not find a ready market in the East, all the barrels in the first shipment were labeled "Muskingum Mills, Troy, Ohio—The Genuine." This flour proved so very much better than that of Ohio, that Minnesota was not afraid



COURTESY OF MINNESOTA HISTORICAL SOCIETY

FIRST GRAIN ELEVATOR IN MINNEAPOLIS, 1874; AND ST. PAUL AND
PACIFIC RAILROAD STATION AT THIRD AVENUE NORTH
AND WASHINGTON STREET

to claim it, and the brand was changed in a few months and called Nicollet.

As western Minnesota became settled and railroads were built, the farmers shipped their wheat to Minneapolis. By 1875 railroads had been extended to the great wheat farms of the Red River Valley. At about the same time great improvements were made in flour milling. By the old method only a medium grade of flour could be made. You have read in another chapter how the Minneapolis mills introduced the newer methods used in France and Hungary. Then Minneapolis flour came into its own,

a barrel commanding from one to three dollars more than it had previously. The name "Minneapolis" became familiar to millions of housewives all over the world.

We have seen how cheap power determined the location of Minneapolis, and how this power, combined with the great pine forests to the north and the wheat farms of the northwest, caused the city to develop into a great manufacturing center. When the Republican National Convention met in Minneapolis in 1892, the badge adopted by the citizens was a ribbon to which a tiny log and a tiny barrel of flour were attached, showing where the industrial greatness of the city lay.

In 1890 Minnesota outranked every other state in lumber. For many years after that date the lumber business continued in Minneapolis on a gigantic scale. With the cutting away of the forests, its last lumber mill was shut down in 1919, but big lumber companies still make their headquarters here. Other lines of woodworking have taken the place of the lumber mills. Sash and door mills, furniture factories, and the distribution of lumber, largely from other states, still make Minneapolis a leading lumber center.

Some one has said that Minnesota's three most famous possessions are the great open pit iron mines of the Mesaba Range, the immense flour mills of Minneapolis, and the Red River Valley. Whether this is true or not, it is a fact that the mills of Minneapolis can turn out over ninety-five thousand barrels of flour in a day, and its great elevators can store over fifty-five million bushels



COURTESY OF MINNEAPOLIS CIVIC AND COMMERCE ASSOCIATION

FLOUR MILLING DISTRICT, MINNEAPOLIS

of wheat. Minneapolis is known as the "Flour City" of the world.

Another product which Minneapolis leads in producing is linseed oil. North Dakota and Minnesota, the greatest flax raising states, supply the raw product for this line of manufacturing. The oil is widely used in paints, varnishes, and printers' inks. What is left of the seeds after the oil is pressed out makes oil-cake, which is valuable for feeding cattle. There is always a market for this oil-cake in the great dairy region near the city, where it is used as a winter feed for cows. Much of it, however, is exported to Europe.

To meet the demands of the thousands of farmers of our own and neighboring states, Minneapolis became a great center for distributing farm machinery. In recent years it has also taken an important place in the

manufacture of tractors and agricultural implements, particularly grain cleaning machinery. Minneapolis threshing machines may be found in many far-off countries. In fact, metal working ranks second to the making of grain, flour, and mill products among the city's varied lines of manufacturing. The third line of products for which the city is noted covers clothing and textiles. Underwear made in Minneapolis is sold all over the United States, and the woolen blankets made in her mills protect thousands from the cold of winter.

As in most really big cities, printing and publishing establishments, railroad shops, and bakeries are found in great numbers. It would be impossible to tell all the articles turned out by the city's factories. At an exhibit of Minneapolis-made goods they seem countless. Minneapolis from its beginning has been a manufacturing center, and such it will always remain, however the goods produced may change or vary in character.

Naturally with so much to ship, many railroads serve Minneapolis, making it one of the great railroad centers of the country.

Besides being a great industrial center, Minneapolis has a most desirable location, well above the river, with the best of drainage, and ten beautiful lakes within its limits. Since territorial days Minnehaha Falls have drawn visitors. Longfellow's *Hiawatha* appeared in 1855 and was the cause of the Indian name being applied to the waterfall, which had been known as Brown's Falls. In the early days nobody thought of coming to the Twin

Cities without seeing Minnehaha Falls, so famous had the poet made them. Broad streets and many fine parks, as well as many fine shade trees, add to the attractiveness of the city.

The Minneapolis Institute of Arts, a magnificent building containing thousands of art treasures, the Walker Art Gallery, and the great University of Minnesota mark the city as a center of culture and education.

In the beginning many people from New England came to Minneapolis to live, while in later years the population was greatly increased by Scandinavians, who have made vigorous and enterprising citizens. All have aided in the city's steady march of progress. With its unusual opportunities both for business and for homes, it is not surprising that those who come to visit Minneapolis wish to come back to stay.

In judging the fitness of any city for manufacturing, these points are generally considered—Power, Labor, Raw Materials, Transportation, and Markets. Check up these points in connection with Minneapolis.



LAKE OF THE ISLES—MINNEAPOLIS

CHAPTER XXII

A TRIP UP THE MISSISSIPPI TO ST. PAUL

While reading, notice the great variety of industries which may be seen on this trip.

When the Rock Island Railroad was completed in June, 1854, the builder celebrated the event by inviting hundreds of prominent eastern people to go on a pleasure excursion with him up the Mississippi. In the company were noted statesmen, ministers, and writers. Ex-President Fillmore and Bancroft, the historian, were among the guests. When they reached Rock Island, Illinois, to which place they had traveled by way of Chicago, five large steamers were waiting to take them up the river. On a beautiful night the boats passed through Lake Pepin. The water was smooth and quiet. The steamers came close to each other and were fastened together so that visits could be made from boat to boat. After a delightful trip they arrived at St. Paul a day sooner than was expected. Imagine the excitement in the young city, when the steamer in advance fired a cannon to announce the approach. The citizens were not quite ready to receive one thousand visitors.

As you know, this route to Minnesota was the most

used in early days. Long before this famous river excursion, Father Hennepin, Carver, and Pike came by this way. Although no railroad president has invited us, we shall enjoy approaching the state in the same fashion and journeying up the Mississippi to St. Paul.

We are all comfortably settled on the deck of a river boat and have just sighted the southern boundary of Minnesota. The stream is fringed with hillsides and bluffs, where fruit growers are proving that our state can raise remarkably fine apples. Back in 1773 a trader who came up the Mississippi tells how he liked the wild crabapples, which grew along the river, probably on the very hillsides we are now passing. In pioneer days apples were much missed by settlers from older states. They used the wild crabapple as a substitute, making it into jellies and pies, when sugar could be obtained.

At La Crescent we leave the boat to visit the orchard of Mr. D. C. Webster, who is known as the "Apple King." He learned much about raising apples from his grandfather, who was a pioneer fruit grower of Minnesota. These pioneers met with many failures, before the varieties best adapted to our soil and climate were found. Since colder countries like Russia raise apples, they knew that failure was not due to cold. In fact success came when hardy trees from Russia and other northern countries were obtained.

Mr. Webster tells us that the hillsides are better fitted for apples than the ridges or valleys because they are less likely to get the killing frosts. He thinks that per-

haps the motion of the air among the trees prevents the frost from settling. Occupying a slope that is almost too steep for a wagon, Mr. Webster's orchard is seldom troubled by early frosts. Although far beyond the average, many of his trees have yielded ten barrels each in a season. He has taken many prizes for his apples.

Apple trees are about eight years old before the first crop is gathered. In the meantime the owner may derive an income from acres of raspberry bushes, since these bear fruit in a much shorter time. Mr. Webster is experimenting with new varieties of apples, trying to find the one most suitable to Minnesota. In fact, he is growing fully fifty kinds of apples and thirty kinds of plums.

Of course Minnesota will never be a fruit state like Oregon and Washington. However, the fruit growers whom we meet around La Crescent tell us that in twenty years or less, we should be able to produce all the apples needed in the state and should also have a big surplus for export.

Continuing our journey up the Mississippi, the view becomes very grand. The bluffs are so high that they look like mountains. Rocks, standing out among the thick woods and half hidden by the trees, sometimes resemble castles. We imagine ourselves sailing on the Rhine River with its castled slopes.

Our next stop is at Winona, once a little Indian village, but now the fifth city of the state in size. At the time when transportation depended on the river, the trade from several valleys reached the Mississippi at Winona.

The city is built on the flood plain, between the Mississippi River and Lake Winona, which lies in an abandoned channel of the river. To prevent the great river from changing its channel as it did formerly, jetties have been built to deepen the current. They look like narrow stone walls built out into the water here and there and serve to hold the current in a narrow channel. The bald bluff called Sugar Loaf Mountain, rising above Lake Winona, forms a well-known landmark to river men.

At Winona three steel bridges reach across the Mississippi. The two railway drawbridges must be opened to let our boat go by, but the wagon bridge is so high that we pass under it without difficulty.

We find that Winona is the greatest manufacturing center in this part of the state, in spite of the fact that its great sawmill, which used to saw billions of feet of lumber, is a thing of the past. Among the many things, which the city turns out, are flour and stock foods, as well as boots and shoes. We are told that a large patent medicine plant located here sells its products in every state in the country and in Canada. Wagons and traction engines are important manufactures; the city also has large railroad shops, foundries, and machine shops. We visit the State Teachers College, which was opened in 1860. Minnesota was the eighth state to establish schools for training teachers, and Winona has the oldest not only in the state but also in the Northwest. In recent years several fine new buildings have been erected.

In the sixties when Minnesota's wheat crop was all

grown in the southern part of the state, much of the grain was hauled fifty or maybe a hundred miles to warehouses on the river, particularly at Winona, Wabasha, Red Wing, and Hastings. From these points the wheat was sent in flatboats down the river. We still see flour mills in most of the river towns.

After leaving Winona, we pass Minnesota City, one of the oldest settlements in the state; but now a very small place, having fewer than two hundred inhabitants. Later we notice Indian mounds. We remember that Carver saw these same mounds and was the first explorer to mention them. Before long we reach Wabasha. This town, named for Chief Wabasha, was once a trading post. The city is situated opposite the mouth of the Chippewa River, at the foot of Lake Pepin. Situated on the flood plain with bluffs shutting it from the prairies beyond, its location seems to us much like that of Winona. The city has long been a business center for the surrounding country. We are interested in the button factory which is located here, where buttons are made from the shells of freshwater clams. For miles along this part of the Mississippi, fishermen collect clams to use the shells in button making. Sometimes they find a pearl valued at hundreds of dollars.

All along our journey we have noticed the flat bottom lands on both sides of the river. We find out that the government is purchasing these lands for what has been named "The Upper Mississippi Wild Life and Fish Refuge." This reserve will include the bottom lands from

Wabasha, Minnesota, to Rock Island, Illinois, an extent of about three hundred miles. When the spring floods subside, the numerous lakes on these flat lands are landlocked, and in them many fish are, we might say, imprisoned. The fish lay their eggs in the quiet waters, and here are the greatest bass breeding grounds in the United States. In the fall great numbers of fish are taken from this natural fish hatchery and are shipped all over the country for the purpose of re-stocking lakes and streams. We are glad that the government is guarding this valuable natural resource.

Leaving Wabasha, we enter beautiful Lake Pepin,



PHOTO BY KENNETH M. WRIGHT

BOTTOM LANDS OF MISSISSIPPI NEAR WINONA—THE GREATEST BASS
BREEDING GROUNDS IN THE UNITED STATES

which is a widening of the river. We are glad to have the captain of our boat explain how the lake was formed. It is all caused by the Chippewa River, which we see entering the Mississippi at the foot of the lake. Although the Chippewa is a small river compared with the "Father of Waters," it has a very strong current. Rising on quite high land in the north central part of Wisconsin, this little river descends on an average of thirty-four inches to the mile. This gives such a swift current that pebbles are rolled along its bed. Much fine earthy matter or silt is carried until the Chippewa flows into the Mississippi. As that slow old stream cannot carry the load, the silt is deposited right across the channel of the Mississippi, forming a dam. This causes the Mississippi to spread out into a lake for thirty miles up its course. Finally the waters rise high enough to flow over the dam, and so the river continues to the south. Lake St. Croix and Lac qui Parle are other examples of this kind of lake, but very few of our ten thousand lakes were formed in this way.

The captain tells us that in time the rivers, which bring their loads of silt into the head of Lake Pepin, will fill up the lake to such an extent that the Mississippi will be narrowed down to an ordinary stream, winding through the mud flats which are already extensive. Then beautiful Lake Pepin will disappear entirely.

On the west shore of Lake Pepin we come to Lake City. For years the state camp of the Minnesota National Guards was held just south of this city. Many tourists stop here, and we see the tourist camp on a beautiful



PHOTO BY HALLENBECK FOR NORTHERN PACIFIC RY.

MAIDEN ROCK ON MISSISSIPPI RIVER

point extending into the lake. We find Lake City well worth seeing. A very large nursery attracts our attention, where are thousands of little fruit trees, which we are told will be shipped to almost every part of the United States and also to Canada and Mexico. Like the other river places Lake City has its flour mill. On leaving this place, we feel that we have seen one of the most beautiful of Minnesota's towns.

At this point Lake Pepin is from two to three miles wide. On the Wisconsin side, opposite Lake City, we see Maiden Rock towering four hundred and fifty feet above the lake. We are interested in hearing the legend of this landmark. Near here once lived an Indian maiden named Winona (Weenonah). This beautiful girl was often called "wild rose of the prairie." She loved a young hunter; but, when he asked her father if he could marry her, the father objected. A warrior who had been on the warpath and had collected many scalps also wished to marry her, and the maiden's parents wished her to become his wife. Although he had been forced to leave her, Winona could not forget her lover. She would not marry the warrior, and even the threats of her parents did not move her. One day the band of Indians to which she belonged came to Lake Pepin to hunt and fish. While the tribe was feasting, Winona climbed the lofty cliff. Standing at the top, she held out her hands toward the people below and told them how sad and lonely she had been since the young hunter had left her. Singing a wild death-song, before the swiftest runner could reach the



COURTESY OF NORTHERN PACIFIC RY.

FOX FARM

height, she dashed herself down and was killed. In the early days the Indians feared to pass the spot.

Rest Island, two miles north of Lake City, is sometimes called the "Little Switzerland of America." Here we may visit the Rest Island Silver Fox Farm, which is said to be the largest in the world. We see the lively little animals running in and out of their pens. From sunrise to sunset they are constantly moving. The men on the farm tell us that the animals seem to enjoy best the stormiest and coldest weather. A strange thing about the foxes is that during captivity they become very short-winded and can almost always be run down by a man, if they escape. We are shown some beautiful skins. At the

end of the tail is a white tip, and the whiter and handsomer the tip, the more valuable the skin. Some of these skins are sent to England where they bring a high price. Enormous sums are paid for unusually fine pairs of pups. We are interested to learn that Minnesota is one of the leading states in the country for fur farming.

From time to time while we are passing through Lake Pepin, we notice more Indian mounds. Our captain tells us that Goodhue County, where we now are, has the largest number of mounds of any single county in the state. As many as five hundred have been found here.

When Colonel Leavenworth was on his way up the river to found a fort, afterwards Fort Snelling, he was met at almost every landing by Indians begging for presents.



PHOTO BY KENNETH M. WRIGHT

RED WING FROM THE MISSISSIPPI RIVER—NOTICE THE FLOUR MILLS

One of these bands was led by Red Wing, a young chief. On the spot where the town which bears his name now stands was an Indian village known as Red Wing's Village. Later a trading post was established here. Red Wing is beautifully located at the head of Lake Pepin, just below the mouth of the Cannon River. Our attention is attracted by Barn Bluff, another landmark to river men. The early Frenchmen thought it resembled the thatched barns seen in France and called it La Grange, which means "the barn." A high bridge spans the river at Red Wing.

Landing, we pass through the city. The streets are well paved. We see not only retail stores, which we are told serve the people living from twenty-five to fifty miles around the town, but also many busy factories. Red Wing is called the "biggest little manufacturing town in the Northwest." We think it a fitting name when we see flour mills, shoe factories, and large modern tanneries, as well as a linseed oil mill, a furniture factory, and iron works. The city ranks very high in the manufacture of clay products. Near here thick beds of very fine clay are found. Red Wing makes sewer pipe and brick and also fine pottery. Just south of Red Wing are two enormous mounds of sand, deposited there in the time of the Great Glacier. Nothing better has been discovered for making filters, and this sand is shipped all over the United States. Engines for boats, which may be seen all over the world, are made in Red Wing.

We learn that wheat was raised near Red Wing at a very early date, and a flour mill was erected here. From

miles around farmers brought their wheat to this mill and waited for it to be ground into flour. Wheat raising became very important in southern Minnesota, and the yield ran as high as forty bushels to the acre. Goodhue County was the leading wheat producing county in the state, and at one time Red Wing was the largest primary wheat market in the world. A primary market handles products grown near by. When the steamboat trade declined, on account of the coming of the railroads, things were changed. Many river towns lost all their trade and were practically killed, but it was not so with Red Wing, which began at once to develop into a manufacturing city.

Wheat is no longer the leading crop in this region, for corn has displaced it. Livestock and diversified farming have brought prosperity to the farmers of this part of the state. Goodhue County, with its fertile valleys and its hillsides suitable for grazing, has become famous for dairying. Land which seemed worthless to the wheat farmer has been used for the grazing of animals.

We learn that the State Training School for boys is located here. The people of Red Wing give us much interesting information and are glad to show off their city. The citizens tell us with pride that they call it "The Desirable City." We agree that it is in every way a good place in which to live.

We make our way up the river. Delicious fresh vegetables are served on our steamer, and we find that a supply has been laid in from the truck farms in the valley land around Red Wing. Before long we come to that

historic place, Prairie Island, where we remember that the first white men in Minnesota, Radisson and Groseilliers, landed. Some forty years later another Frenchman established a fort and trading post here. On this island, to our surprise, there are several lakes. Here we see thousands of shells which have been taken from the river for the pearls which they may contain.

Just before we reach Hastings we see the St. Croix River entering the Mississippi from the north. Not very long ago this was a great lumber stream. Between the two rivers is a narrow tongue of sand. Here was the town of Point Douglas, named in honor of the great statesman who helped Minnesota to become a territory. On this spot before Point Douglas was heard of, was located the first postoffice in what is now the state of Minnesota. No trace of the early settlement remains.

On the other side of the river is the town of Hastings, named for Henry Hastings Sibley. Here we see an unusual bridge across the river. In order to reach from the high bank on the east side to the low bank opposite without too steep a decline, the bridge winds around in a spiral. We have never seen anything like it before. We see the ruins of the old mill which was built by Alexander Ramsey in 1855, the first in Minnesota to crush wheat with rollers instead of with stones. The roller type of machinery was a great improvement over the old-style millstones, and in time completely changed the flour milling business. This mill became famous for flour made from Minnesota spring wheat. In another part of



COURTESY OF ST. PAUL ASSOCIATION

STOCK YARDS, SOUTH ST. PAUL

the town, there is a modern mill, but these old ruins are a landmark in the history of industry in our state. A walk through the main business streets shows us that Hastings is a busy city. The dam, which is to be built across the Mississippi at this point, will deepen the river and make possible the use of much larger boats.

Farther up the river we pass the great stockyards of South St. Paul, and very soon the Capital City is spread out before us. The Indian Mounds stand out boldly at the top of the great bluff. As the river curves, the beautiful State Capitol comes into view. Our interesting river trip has come to an end, but St. Paul has much which we wish to see.

This trip brings out the changes in industry in the southeastern part of the state. Name all the occupations mentioned which seem comparatively new. What new animal industry suggests the earliest work of Minnesota?



COURTESY OF ST. PAUL ASSOCIATION

MINNESOTA STATE CAPITOL

CHAPTER XXIII

ST. PAUL—THE CAPITAL OF MINNESOTA

Decide, as you read, what you would most like to see in this city.

For many years St. Paul has been called the Gateway of the Northwest, and the name is well chosen. In the early days of Minnesota, when the Northwest was inhabited almost entirely by Indians, trappers, and traders, St. Paul was an outpost of civilization. At that time it became the chief fur market of the country. All of its business centered around the trade in furs. Valuable furs were brought in by canoes coming down the Minnesota and the Mississippi. Weather beaten trappers with packs on their backs came to exchange the skins, which they had collected in the long winter months, for supplies to take them through the next hunting season. For years the Red River carts added greatly to the life and trade of St. Paul. In 1863 these carts brought a quarter of a million dollars' worth of furs to St. Paul. The money received for the furs was spent in merchandise in the city. Clothing, ammunition, guns, and tobacco, as well as many other things were purchased on a large scale. One firm sold tobacco to the value of four thousand dollars in one year. St. Paul supplied the vast Northwest with the

goods produced by civilization. These goods were not produced within its own neighborhood, however, but were brought here from down the river. The articles may have come from St. Louis or from some river town of Illinois, although very likely they were first shipped to these places from eastern cities.

Long ago the fur trade declined, and many of the fur-bearing animals disappeared entirely, but the immense jobbing trade, begun at that time, continues today and is still a great line of business in the city of St. Paul. What shall we find in the great jobbing houses of the city? Here are machines, tools, and all kinds of hardware. Again we see drygoods, clothing, and hats; or perhaps canned goods, soap, and other groceries. Indeed we find so many things in the jobbing houses that it would be impossible to name them all. Although some of these articles may bear the St. Paul label, most of them were manufactured in more eastern cities. Dealers from all over Minnesota, the Dakotas, and even from Montana stock up their stores from these jobbing establishments. They either come to the city to select their goods or buy from the hundreds of agents who travel over a wide territory "drumming" up business. Perhaps in the more remote places, selection is made by means of catalogs issued by the jobbers. Of course these dealers buy in large quantities at wholesale prices. They make their living by retailing the goods to the people of their own towns, or to the farmers, lumbermen, and miners who come in from the country districts for supplies.

Even after the first conditions have changed, an early start often holds an industry. This is true of the fur industry which came to St. Paul because of its position at the head of navigation on the river. In 1871 buffalo skins were made into overcoats and sleigh robes in St. Paul, and soon a wholesale trade in fur was flourishing. The buffalo has long since disappeared from our plains, but St. Paul is still a leading center for the manufacture of high grade furs. Between three and four million skins, coming from all parts of the world, are made up every year in the factories of the city.

By 1850 fur trading was displaced by lumbering as the leading industry of Minnesota. Later wheat was king, but now diversified farming and dairying reign supreme, and St. Paul is the dairy center of the Northwest. St. Paul ranks second in the whole country as a butter-producing city. Its butter reaches the markets of New York, Philadelphia, and other eastern cities. Ice cream is also made here in very large quantities, by the most up-to-date methods. In these factories visitors are always welcomed, and every process is open to inspection. The freezing room, with its uniform temperature, winter and summer, of nine degrees below zero, is an interesting part of the plants.

The strongest link between the farms of the Northwest and the city of St. Paul is made by its livestock market and meat packing industries, rather than by its dairy products. Few realize the important part which this line of industry has played in changing the nature of farming

from straight grain raising to the production of a variety of crops and livestock, not only in Minnesota but in the border states as well. By the new plan of diversified farming the over-production of grain has been avoided, and the fertility of the soil restored. The greatest service rendered to the farmer by St. Paul is that it provides a ready market, in which he may sell his livestock and receive his money within twenty-four hours. Here is the largest commercial dairy cow market in the world. The sales are made mostly to buyers from the states of the Middle West, although many come from eastern and western states. Shipments have been made quite frequently to Canada, Mexico, the Central American states, and Cuba. The stock grower can dispose not only of his high-grade stock, but also of the poorer class of animals. This is a great advantage to the farmer, for formerly these animals were almost a total loss. Even though they may not be fit for food, in the modern packing plant, there is a use for every part of the slaughtered animal.

The livestock industry is located at South St. Paul on the Mississippi River. This suburb lies about two miles south of the city limits of St. Paul. Nowhere in the world can more modern or better equipped packing plants be found. Beginning in 1887 in a small way, these packing plants are now the largest in the West and rank fourth in the world in size. While the greater part of the meat is used in the Northwest, much is sent to eastern cities and also to foreign markets. The refrigerator car

has long made meat packing a world-wide industry. Of the many interesting sights at a packing plant, the cooling rooms are among the most wonderful. Walls and racks, covered with thick white frost, radiate the cold. Here the meat is preserved from decay for an indefinite time. Every piece of meat must bear the tag of the government inspector, thus protecting the public. In the modern meat packing plant there is no waste. By-products from the slaughtered animals supply leather, soaps, fertilizers, glue, and many other useful articles. The welfare of St. Paul depends in large measure on the welfare of the Northwest farmer, and the livestock industry more than any other proves the close connection between the city and the country.

Since early times St. Paul has been a great center for printing and publishing. More than six thousand people are engaged in this line of work, which is one of the most important, if not the leading line in the city. Here is located the largest law-book publishing house in the world, furnishing its books to every city in the United States.

St. Paul makes a great variety of paper products. Pasteboard cartons and labels of many kinds are made here and widely used throughout the neighboring states. As a shoe manufacturing center St. Paul stands high in the Northwest. It does not yet rank among the great shoe centers of the country, but it is ambitious to do so. Many articles of clothing are also made here in great quantities. Its factories supply sheep-lined coats, over-

alls, shirts, and hats. One of the largest bakeries in the world turns out bread to be eaten with St. Paul butter. Much of the flour consumed is made in St. Paul.

As you have seen, St. Paul people may be well clothed and fed from the products of their own city. Their homes may be kept warm in winter with the coke turned out by the great By-Product Coke Plant which works day and night, year in and year out. The products from this plant have more than a local market. Coke has gone to the copper smelters of Montana, and fertilizer made here is shipped across the Pacific Ocean to enrich the farms of China and Japan, and the pineapple plantations of the Hawaiian Islands.

Among other things which the iron foundries turn out are the girders of skyscrapers and the spans of great bridges; the machine shops and railroad shops give employment to many workers. Although St. Paul is still better known for jobbing than for manufacturing, her long list of factory products shows much variety and is constantly increasing.

Transportation is furnished by nine great railroad systems, for St. Paul is one of the great railroad centers of the United States. The so-called "Midway District," which lies on the western edge of the city, adjoining Minneapolis, offers locations of unusual advantages for factories. Since this district is far removed from the crowded downtown streets, there is room to grow. Here the freight cars can come to the factory door to receive or discharge their loads. This is a great advantage for it

cuts out the cost of trans-shipment. The railroads have found the "Midway District" such a convenient place for transferring freight that St. Paul has become one of the largest freight transfer points in the world. Bridges make traffic safe over the numerous tracks.

A strong movement has been started to revive the traffic on the Mississippi River. Modern steel barges have been made, particularly adapted to the shallow channels of the river. St Paul has built a dock, equipped with the most modern machinery for unloading cargoes of all kinds. Already, barges laden with sisal, sugar, coffee, and various other products have made the trip from New Orleans to the Twin Cities. European rivers are a great factor in commerce, and it is to be hoped that in the future the Mississippi will regain at least a part of its old-time importance in transporting the bulky products of trade.

Along the river at St. Paul are great bluffs of white sandstone, on account of which the Indians called it "Imnijaska," meaning "white cliff." In his diary, Jonathan Carver speaks of this sandstone as "a stone so extremely soft that it might easily be penetrated with a knife, a type of stone everywhere to be found near the Mississippi." This sandstone formation has been taken advantage of in several ways. With pick and shovel, many caves have been dug in it. The sandstone is so soft that it can be quite easily cut away, but it does not crack or fall, and no supports are needed in the caves. In caves made along the river, mushrooms are raised;

hundreds of thousands of pounds are shipped every year to Chicago, Omaha, Winnipeg, and other large cities. The crop matures very rapidly. Little specks of white which one may see on the ground of the caves are mushrooms just appearing above the soil. Nearby are others only a few days old, but full grown and ready to be gathered for the market. Rainfall, drought, and frost do not affect this unusual crop, in which St. Paul leads the country.

Tunnels made in the sandstone are used for electric light, telephone, and telegraph wires. These tunnels are dry and clean and are lighted by electricity. It is a most interesting experience to walk through them. The sides and walls are just the natural rock. No other city in America has tunnels like these. St. Paul sends this sand by the carload to western Canada, where it is used in the manufacture of common glass, suitable for bottles and such things.

The great Ford plant, which is the largest outside of Detroit, is situated on the bluff above the river, using the power developed by the great Government Dam. It is planned to ship the finished product by way of the river, and many raw products will come to the plant in the same way. To help in the handling of freight, tunnels have been made from the factory, down to the level of the river. This plant is thronged with visitors. Here at any time one may witness the various parts of an automobile being put together, or assembled; the speed and skill of the mechanics make this a most interesting

sight. Every day hundreds of finished automobiles are turned out. Glass making is carried on in the plant, and in time it is hoped that Minnesota will become an important center for glass manufacturing.

Sandstone is capable of carrying a great deal of water. Many business firms of St. Paul have their own artesian wells, which draw their supply from this water-bearing rock. Such water is extremely pure and free from disease germs.

On the west bank of the river, near the mushroom caves but higher up on the bluff, is a bed of rock called shale. From this rock an excellent quality of brick of many handsome colors is made. These brickyards are among the most valuable in the state.

The State Agricultural College, which is part of the University of Minnesota, is located in the western part of the city. Since this is one of the highest points in St. Paul, the college buildings may be seen at a distance. Close by are the State Fair grounds. You remember that Minnesota has the largest fair of any state in the country. For many years the Minnesota State Agricultural Society had no permanent place for holding fairs. In 1860 a fair which was attended by 8,000 people was held at Fort Snelling. The present grounds were presented by Ramsey County in 1885, and the State Fair has been held here ever since.

The hilly location of St. Paul has been compared with that of Rome. The high land on which the city is situated makes it not only picturesque, but also remark-

ably healthful. On the hills overlooking the river, below the center of the city, is the Indian Mounds Park. This is one of St. Paul's several beautiful parks. With the outlook for many miles along the great valley and the river nearby, where fish might be obtained for food, the spot was exactly suited to the red man. The Indians brought the bones of the dead to this place for burial in the mounds, and the chiefs held councils here to settle the affairs of the tribe for the coming year. One of our historians says, "It is thus seen that St. Paul was even then the established seat of government, the capital as we might say of the adjoining Sioux Country."

In the bluff below the Indian Mounds may be seen what is left of Carver's Cave, which was hollowed out of the sandstone just as the mushroom caves have been at a much later date. Somewhere near here, Father Hennepin landed, a prisoner in the hands of the Indians. Across the river in sharp contrast to these reminders of the early history of this region, is the air port, an important factor in the business life of St. Paul.

On the flat bottom land at the foot of the bluff has been built the State Fish Hatchery. In the ponds, fed by the cool springs which issue from the sides of the bluff, are thousands of fish of all sizes and kinds. Every year many millions of young fish are sent from this hatchery to stock the lakes and streams throughout the state.

On a commanding hill in the center of the city, is the magnificent cathedral. This is the successor of Father



COURTESY OF ST. PAUL ASSOCIATION

CATHEDRAL OF ST. PAUL'S AND THE MONUMENT TO THE CIVIL WAR
SOLDIERS FROM MINNESOTA

Galtier's little log chapel, which was dedicated to Saint Paul, the Apostle of Nations, and which gave the name to the city.

On still another hill is Minnesota's Capitol, which can be seen for many miles around. The green sloping lawns and well-arranged groups of trees give a pleasing approach. Very near the Capitol, but on the side of the hill on rather lower ground, is the building of the Minnesota Historical Society. Here the visitor can find much of interest. A pioneer log cabin and a Red River cart bring back the early days. The costume worn by the drivers of those famous carts is pictured in the portrait of Joe Rolette. A brass tablet on the frame bears this

inscription, "The Hon. Joe Rolette who saved the capital to St. Paul by running away with the bill removing it to St. Peter, in 1857." Many an hour may be enjoyably spent in the museum library.



PHOTO BY KENNETH M. WRIGHT

BUILDING OF THE MINNESOTA HISTORICAL SOCIETY

No one goes to St. Paul without visiting the Capitol, which is one of the finest buildings in the country. It is built of greyish white Georgia marble, with a foundation of grey granite from St. Cloud. Some thought that a stone from the quarries of Minnesota should have been chosen for the entire building, but the architect, Mr. Cass Gilbert, considered the white marble more suitable for carrying out his plans. A marble dome, crowned by a gold ball, rises from the center of the building. Over the

main entrance, at the base of the dome, is a wonderful sculptured group representing "The Progress of the State." It consists of a car of triumph drawn by four horses. In the car stands *Prosperity*, holding a horn of plenty in one hand and in the other a banner with the name, *Minnesota*, on it. Guiding the horses are two young women. The group is made of gilded copper over a steel construction.

On entering the building the first view of the interior comes up to all expectations. Only skilled artists were chosen to decorate the Capitol, and they have selected subjects which picture the progress of Minnesota from pioneer days to the present. The development of her manufactures, commerce, farms, and mines are all shown.

A guide explains every point of interest. He tells that the handsome stone used in the rotunda and the corridors, as well as in many other parts of the building, is limestone from the quarries of Mankato and the nearby town of Kasota. Marbles from France, Italy, Greece, and even from Egypt have been used in finishing. Side by side with the stones from Minnesota's quarries are marbles from the same Italian and Grecian quarries which supplied the famous monuments of ancient times.

In the niches around the rotunda on the second floor are life size bronze figures of Civil War heroes. Among these is the statue of Colonel William Colvill, the brave commander of the Minnesota troops at Gettysburg. An-

other statue is that of General Shields, once a senator from Minnesota, and also a hero of the Civil War.

By looking closely, one can see the moccasin flower, Minnesota's state flower, carved in the gilded capitals, which crown the many marble columns of the second floor. The state flower is also used at the top of the great columns on the exterior, but the columns are so high that it is hard to distinguish it.

In the open spaces around the rotunda on the second floor, are eight great columns made of Minnesota granite. The four grey pillars are from the quarries near St. Cloud, while the four which are deep reddish brown, came from Ortonville in the western part of the state. Some think that this Ortonville granite is the handsomest stone used in the whole building. Each of the eight columns is made from a single block of stone.

Four wonderful paintings representing "The Civilization of the Northwest" may be seen from the rotunda. Below these pictures runs a border or frieze made of quartzite from Pipestone, its rose-red color giving a pleasant effect. Just below the skylights, by which the grand staircases and corridors are well lighted, are twelve smaller pictures, bearing such titles as *The Dairy Maid*, *Logging*, *Mining*, and *Commerce*. All are well chosen to illustrate the development of the state. In the floor of the rotunda is a large star made of glass with a framework of brass. This of course suggests the "North Star State," and also serves to light the basement below.

The subjects for the paintings in the governor's room



MINNESOTA STATE FLAG—NOTICE THE MOCCASIN FLOWER, THE STATE SEAL, AND THE GOPHER

are all taken from the history of Minnesota. The earliest event pictured is the discovery of the Falls of St. Anthony by Father Hennepin. *The Battle of Gettysburg* and *The Treaty of Traverse des Sioux* are also of great interest. In the governor's room we see the original state flag. Minnesota did not have a flag until 1893, at the time that the state flower was chosen. The state

seal fills the center of the flag, and around it is a wreath of moccasin flowers. Above is the motto of the state, "L'Etoile du Nord," which means *The Star of the North*, and "1858," the date of Minnesota's becoming a state. Below the design is the name, "Minnesota." On top of the gilt standard is a little gopher. Altogether it is a very interesting flag.

The pictures in the Supreme Court Room by the great artist, La Farge, are considered among the finest in the building. The painting showing the discoverers at the source of the Mississippi and the one entitled *Minnesota, the Granary of the World*, are both in the Senate Chamber. In the beautiful retiring room of the House of Representatives the gopher is carved in the wood work to picture the fact that Minnesota is called the Gopher State.

The Legislature of 1905 was the first to meet in the new Capitol. The first governor to be inaugurated in the building was John A. Johnson. In front of the Capitol is a large bronze statue of Governor Johnson, whose untimely death caused a great loss not only to the state, but also to the nation. Although Governor Johnson was the first governor to be born within the state, his parents were Scandinavians. Many other Scandinavian settlers and their descendants have added greatly to the progress of Minnesota. Governor Johnson has been called one of the "master builders of the imperial Northwest."

The total cost of the Capitol was four and a half million dollars. The commissioners, who had charge of this huge sum, were such honest men that it is a matter of

record that there was absolutely no graft connected with the construction of the building.

The Capitol has been well called the glory of Minnesota. The people of St. Paul feel justified in claiming that the beautiful Capitol alone makes their city worth seeing, to say nothing of its wonderful natural location, its historic interests, and its variety of industries.

In this chapter we read of honesty in connection with the building of the State Capitol. Can you recall a previous passage where our state benefited by the services of a very honest man? Make a list of places which you would like to visit when you come to St. Paul.



SEE MINNESOTA FIRST



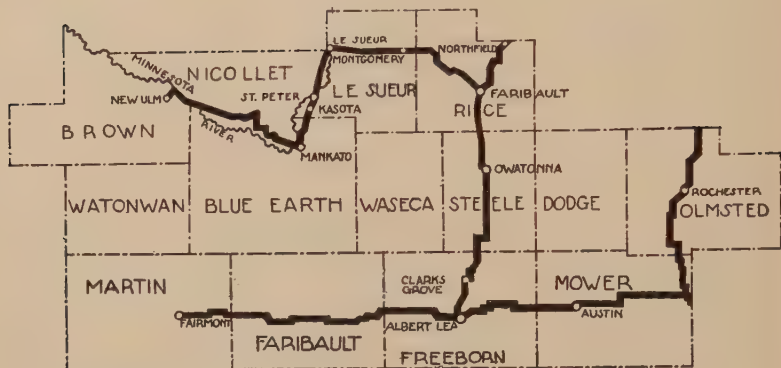
CHAPTER XXIV

SOUTHERN MINNESOTA AND THE MINNESOTA VALLEY

As you read, consider why there are more cities in this part of the state than in any other part.

Some years ago the University of Minnesota offered a very delightful course to summer students. This course consisted of four weeks of travel in various parts of the state; the object was to know Minnesota. Wherever the students went, they were known as the "See Minnesota First" party. They journeyed by rail; but at most of the places visited, public-spirited citizens gave their time and also supplied automobiles to take the party around. In this way they were shown the natural beauties and the industries of the neighborhood. The leader of the party gave each member a large map of Minnesota, which was constantly consulted.

Let us take a "See Minnesota First" trip, and see some of the many wide-awake and rapidly growing towns. Of course we have already visited some of them. Since we have much ground to cover, an airplane might be the most desirable way to travel, but there is no airplane service to be obtained, so the automobile will serve our needs. We must be sure to take our road maps along



SOUTHERN MINNESOTA AND THE MINNESOTA VALLEY

with us, and to trace our route as we go from place to place.

Starting in the prairie region in southern Minnesota, we see well cultivated land everywhere. The first crop here was wheat, but it has been found that corn grows as well here as in states farther south. Corn is now Minnesota's most valuable crop. With it came the dairy industry, which has proved a source of great wealth. Rich grasses are abundant, and the corn fattens more and more hogs every year. We notice many other crops. As we drive along, we see a beautiful field of flax. It is covered with blue flowers and looks much like a lake at a distance. Here alfalfa with its purple bloom, or maybe sugar beets, border the road. Now we pass oats, yellow and almost ready to harvest; and near by wheat is growing. Every now and then we pass a herd of cattle, contentedly feeding in a green pasture. We see sleek looking

pigs, also many chickens. Our ride shows not only an example of diversified farming at its best, but also furnishes a very pleasing landscape.

As this part of the state became more densely settled, towns naturally grew up where farmers could market their products and buy needed supplies.

Rochester is such a town because it is the market for a rich farming region. Situated on a fork of the Zumbro River, much waterpower is available. We see a flour mill, a creamery, and several factories. However, these are not what have made Rochester famous. All over the United States it is noted for its wonderful hospital and doctors; the hospital is one of the largest in the world. We learn that many of the people whom we meet are here for medical treatment. At all times the population is considerably increased in this way. These people have reason to remember the Mayo brothers gratefully, for they are among the most skillful doctors the world has ever known.

Following the route which we have laid out on our maps, we continue south and then west to Austin. We are now in the most southern row of Minnesota counties, next to the Iowa line. Austin is a farm center and much more. Located on the Cedar River, the city is proud of its Water, Light, and Power Plant. Its great packing plant has slaughtered over a million hogs in a year. When we are told that the same year the products from this plant were sent not only to every state in the Union but also to Canada, Mexico, South America, and to most of

the countries of Europe, we see the fitness of the slogan, "The World takes what Austin makes." Of course this plant is of great benefit to the farmers around the city.

Austin claims to have the largest hatchery in the state, sending chicks to many parts of the country. While visiting Austin's greenhouses, we are told that three thousand roses are shipped from here every day. We are interested in seeing the brick, tile, and cement works located here, also the creameries and factories.

Among the other sights worth seeing are the million dollar high school and the Horace Austin State Park. In 1836 a party of hunters from Fort Snelling visited the place where this park is located. Among them was Doctor Emerson and his famous slave, Dred Scott. Deer, bear, and elk were then plentiful here. Both the park and the city are named for Governor Austin. The citizens claim that Austin is one of the best little cities in the Northwest, and we feel that they have reason.

A road leading westward, brings us shortly to Albert Lea, a town in Freeborn County. We recall that the cooperative creamery, which served as a model for the many others in the state, was started in this county in 1890. Long ago, dairying took the lead of wheat. Poultry raising has increased rapidly during the last few years and is being carried on in a scientific manner. We pass by some of the finest farms in the state, where we notice onions, cabbage, celery, potatoes, and sugar beets growing. These farms, once peat bogs, have been made into very productive land by drainage.

The center of this rich region is Albert Lea, with railroads approaching it from all sides. The Minnesota State Experimental Creamery, the only state owned creamery in the United States, was established here in 1911. This creamery helps the dairymen of the state along the line of better dairying.

Albert Lea is noted for factories, as the city's slogan suggests, "If it is made in Albert Lea, it is good." Among the many good things manufactured, are tools, camp cook stoves, which are widely known, sprayers used on dairy farms, and road building machines. Butter and flour are made, chickens are hatched to sell, a packing plant receives the hogs of the country around, and a nursery supplies trees and shrubbery all through the Middle West. We see the enormous smokestack on the plant which furnishes electric light and power for the town. Two beautiful lakes lie within the city limits, one bearing the same name as the city. We are interested to learn that Albert Lea was a young surveyor, who explored this part of the state for the government.

Leaving the prosperous city of Albert Lea, we take the road to the west, which brings us to Fairmont. The city was founded around old Fort Fairmont, built for protection against the Indians. Although it is a much smaller city than the last two we have visited, the same industries may be found here. Fairmont has its creameries and poultry business, including large chicken hatcheries. A leading manufacturing line is the making of gasoline engines for farm use and other purposes. There is also

a cannery, where corn, peas, and other vegetables are canned. Wherever we go, we see how the cities are an outgrowth of the rich farming districts round about them; the cities and the farms are absolutely dependent on each other.

We have been told that Minnesota's leading fish farmer lives in Fairmont, and that it is worth while to see the fish at feeding time. By inquiring, we find the lake where the farm is situated. While we are waiting on the shore, a wagon loaded with green pea pods and shelled corn comes along the road, and the driver turns his horses directly into the lake. Immediately the smooth surface is broken by waves. Hundreds of fish are dashing for the spot, where the driver is throwing shovelful after shovelful of pea pods and corn into the water. The fish are carp, which we are told can be more easily shipped alive than any other fish. These carp will be sold alive in New York City, where there is always a market for them. The owner tells us, that the increased weight and greater size of the fish, make the feeding pay. The corn is raised on his own place, and the pea pods are obtained from the Fairmont cannery. We do not wonder that this fish farm is one of Martin County's show places in the summer, for, like many other tourists, we have enjoyed the strange sight.

Our next stop will be Owatonna. This city is some distance north of Albert Lea, and it is necessary for us to retrace the road eastward before turning north. We pass through Clark's Grove, where that pioneer coopera-

tive creamery, recently mentioned as the model after which the whole state patterned, was started. A little later we enter Steele County. These county names are interesting. Of course we all recall Franklin Steele, the great lumberman and the "First Citizen of St. Anthony."

Steele County claims to be the "World's Richest Agricultural Community," and we are greeted by signs of prosperity. Everywhere are modern farm buildings, silos, and up-to-date machinery. Almost every farmer owns an automobile and has a telephone in his home. The cause of this prosperity is explained by the well-known title of Owatonna, the leading city of Steele County—"The Butter Capital of the World." Every one we meet tells us some fact about the dairy industry. We are told that the county has twice as many cows as people and more than a score of cooperative creameries, which turn out millions of pounds of high grade butter. One enterprising young farmer with a remarkably good memory informs us that Steele County makes as much butter as eleven eastern and southern states combined, naming them all for our benefit. Here, as is always the case, the dairy cow has brought diversified farming, and we pass fields of oats, wheat, barley, and corn. Potatoes are raised also, and chickens add to the farmer's income.

Approaching Owatonna, we see many factories; for the city is not only a farm center, but does considerable manufacturing as well. As we might expect, we find creameries. Butter tubs, churns, and many other things are made here. Among the factories is the largest plant

for manufacturing jewelry west of New York state, it is claimed. The nurseries around the city do a large business, distributing trees, plants, and seeds over a wide territory. This city is quite an educational center, as well, and we are interested in the home for children of the state, who would otherwise be homeless. Some of the little ones whom we see are almost babies, and here they will be brought up and educated by the state of Minnesota.

The water from Owatonna's famous mineral springs has at times been bottled and shipped away in great quantities. While in town, we hear the legend of Owatonna, the beautiful daughter of a mighty Indian chief, who was brought back to health by this healing mineral water.

Following the highway running north from Owatonna, we come to Faribault. Both cities are on the Straight River. Faribault is in Rice County at the point where the Straight River meets the Cannon. A more beautiful situation would be hard to find. The city was founded about one hundred years ago by Alexander Faribault, the fur trader. The Indians who lived around here welcomed him in a friendly manner and promised to collect furs if he would establish a trading post. The junction of the two rivers, the many lakes near, and the abundance of game and fur-bearing animals made the spot an ideal one. Faribault's log cabin was the first house ever built by a white man on the present site of Faribault.

Two other citizens, of whom Faribault is proud, are



PHOTO BY KENNETH M. WRIGHT

PEONIES IN FARIBAULT, THE PEONY CENTER OF THE WORLD

General Shields and Bishop Whipple. It is thought by some, that it was due to Bishop Whipple's influence over the Indians and the love which they bore him, that the town was not attacked during the terrible Sioux Massacre. In the Capitol at St. Paul stands the statue of General Shields, and it was he who was chosen to represent Minnesota in the Hall of Fame, in the National Capitol at Washington.

Faribault is rapidly developing along the line of manufacturing. Here is a flour mill with a daily capacity of 3,400 barrels. We are shown a list published by the town of over two hundred articles which it makes. Creamery products and canned goods are on the list, as well as woolen blankets and furniture. Its nurseries send trees, shrubs, and farm and garden seeds all over the Northwest. The city calls itself "The Peony Center of the World," and we regret that these flowers are not in bloom while we are here. A peony festival is an annual event here.

The business center lies between the two streams, while on the bluff to the east of the Straight River for nearly two miles are situated several state and private schools. The State School for the Deaf, another for the blind, and a third for the feeble-minded are here. Among the private schools we see the Shattuck School, one of the oldest military schools in the United States. Stately buildings, surrounded by grand old trees, give an air of culture. We feel that Faribault is most appropriately called the "Athens of the Northwest." Within ten miles of Faribault

are ten lakes. The fine old trees bordering them, as well as the sandy beaches, look very attractive to us, and we should like to linger here.

We drive in a northeasterly direction to Northfield, also in Rice County. The dairy cow has brought prosperity to this county, which is famous for its herds of pure-bred cattle. We pass fine herds of Holsteins, which Rice County raises for its own use and to sell to other dairy districts. Northfield is noted as a center for this breed of cattle. Here is a factory which cans milk, claimed to be the only one in the state. The farmers work co-operatively not only in their creameries, but also with their eggs and poultry, and in marketing their livestock.

Northfield has two colleges, Carleton and St. Olaf's,



PHOTO BY KENNETH M. WRIGHT

SHATTUCK MILITARY SCHOOL AT FARIBAULT



PHOTO BY KENNETH M. WRIGHT

NORTHFIELD IN RICE COUNTY IS A CENTER FOR HOLSTEIN CATTLE

both of very high rank. The city is also coming to the front along industrial lines. We hear that the largest observatory in Minnesota is at Northfield, so we plan to spend the night here. By doing this, we may have a chance to look at the stars through the wonderful telescope at the observatory.

Early the next morning we journey to the west, and before long we come to Le Sueur County. Here, as in many of the southern counties, corn has taken the place of wheat. Very recently farmers have planted several thousand acres to peas and sweet corn on account of the great canning factories, which have been established at both Montgomery and Le Sueur. Since we reach Montgomery first, we visit the cannery here. We are told many interesting facts about this industry, which is quite

new in Minnesota, but which seems likely to grow in the next few years. Our guide tells us that the vegetable canning industry is a great thing for the farmer, for he can plant his garden truck with the certainty of selling at a good profit to the factories. He says that Minnesota canned goods compare favorably with any on the market. At Montgomery we also see a large flour mill.

We meet an old resident, who gives us some information about this region in pioneer days. He tells us that, where the city of Montgomery now stands, there was once a great cranberry marsh. With other boys and girls he spent many a day picking cranberries. Since the fruit was easy to ship and there was always a ready market for it, considerable money was earned in this way. This helped out when crops were poor or could not be sold. In the woods of Le Sueur County ginseng grew quite abundantly, and the children hunted for this and dug up the roots to sell. In hard times the old gentleman seemed to think, some pioneers would have had to give up their claims, if it had not been for the profits from ginseng and cranberries. We remember how cranberries were once an important export of Minnesota; in the year 1849 over three thousand barrels were shipped down the river from St. Paul and Mendota.

After passing through Le Sueur, we turn south and follow the Minnesota River as far as St. Peter, a city in Nicollet County. We remember how we saw the name of Nicollet, the explorer, carved on the rock at Pipestone. It was Le Sueur, the old French explorer, who discovered



MONUMENT AT TRAVERSE DES SIOUX. THE WOMAN HAS SIOUX
INDIAN BLOOD. SHE WAS AT TRAVERSE DES SIOUX
WHEN THE TREATY WAS MADE

and explored the Minnesota River, which he called the St. Peter's. As we pass through Nicollet County, we see many fine apple orchards, also fields of grain and vegetables.

A little north of St. Peter was the old trading post of Traverse des Sioux, famous for the treaty made here with the Indians in 1851. In the suburbs of St. Peter we see the great boulder on which the commissioners who were appointed to make the treaty, displayed chests of gold coins, trinkets, and various other things. In this way they hoped to induce the Indians to agree to their terms. Some years ago the Daughters of the American Revolution had this boulder placed on a pedestal and marked with a tablet. As we stand on this historic spot, we think of the painting, "The Treaty of Traverse des Sioux," which we have seen in the State Capitol at St. Paul.

The old trading post was long ago absorbed by the newer town of St. Peter. In passing through the city, Gustavus Adolphus College and also the State Asylum for the Insane are pointed out to us. St. Peter like other towns we have visited has its creameries.

Crossing the Minnesota River at St. Peter, we go southward. The road takes us through Kasota, and we see the quarries where the beautiful Kasota stone is being cut. This is the pinkish yellow stone which is extensively used in the interior of the Capitol at St. Paul.

As we approach Mankato, the road winds down from the high bluffs to the Minnesota River. Deep ravines, which lead up the sides of the bluffs, furnished excellent

hiding places for the Indians during the Sioux War. At a big bend in the river is situated the city.

From the moment we strike the main street, we are much impressed with the enterprise of Mankato, the metropolis of south central Minnesota. Several railroads pass through the city. Like St. Paul, only in a smaller way, Mankato is a great jobbing center and distributes many million dollars' worth of goods every year. Its creameries and good-sized flour mill are important. Stone like that which we saw at Kasota is quarried here. Mankato stone has been called the most beautiful stone in the world and has been used to construct handsome buildings in New York and Philadelphia. The quarries turn out much crushed rock which is used for road building, also powdered limestone which is used to enrich and sweeten the soil. Other leading products are cement and tile. Many places in this part of the state manufacture tiling, which is used in making tile drains on land otherwise too wet for farming.

Mankato spreads over the surrounding bluffs. Various schools are beautifully located on these terraces. We visit the Teachers College with its fine new buildings. When all the schools and colleges are in session, the students increase the population of the city considerably. The city takes great pride in Sibley Park, which derived its name from the fact that General Sibley camped here with his army during the winter following the Sioux outbreak.

Minneopa State Park is an attractive spot near



PHOTO BY KENNETH M. WRIGHT

MINNESOTA RIVER NEAR MANKATO

Mankato. On our visit here, we see the beautiful Minneapolis Falls in the creek of the same name. The creek takes a double fall, one just below the other, making in all a drop of sixty feet. The fine trees add greatly to the charm of the park.

The northern part of Blue Earth County was once heavily wooded. This was part of what is known as the Big Woods, which formed a broad border along the western and southern edges of the pine forests. These were composed of different hardwood trees. Most of this forest has been cut, and farms have taken its place. Long before there was any market for this hard wood timber, the land was cleared for farming. The farmers burned the wood, in order to get rid of it. The soil and climate are excellent for farming. The winters are so mild that plowing is often done during the latter part of November or the first part of December.

Everywhere we have found good roads, but as we drive about Blue Earth County, the roads seem to us unusually good. There are fifteen large lakes in the county; and with their wooded shores, they appear very inviting. The name Mankato was originally Mah-kah-to, which means "blue earth." In certain places near the Blue Earth River, which flows into the Minnesota at Mankato, blue earth may be seen, such as the Indians once used for paint. When Le Sueur, the explorer, saw this blue earth, he thought that he had discovered copper, and sent two tons of it to France, where it was found to be worthless.

After a little exploring around Mankato, we follow the



PHOTO BY KENNETH M. WRIGHT

SIBLEY PARK. MANKATO

road to the northwest which leads to New Ulm, another city of the Minnesota Valley. Many Germans settled in New Ulm, and in the early days these industrious people started fine farms all about the city. Near the center of the town we see the monument for the heroes of the Sioux Massacre. We remember that New Ulm was nearly destroyed at that time. On the monument in bronze is the head of Judge Flandrau, the brave defender of the town.

Brown County in which New Ulm is located is highly cultivated throughout, and New Ulm is the center of trade for the farmers. Here we see a very large flour mill, and we learn that creamery products, poultry, and wool are shipped. In addition building stone is quarried and brick is made.

When we go from New Ulm, we are leaving southern Minnesota. We shall remember its well kept farms, its creameries, and flour mills. Everywhere man has improved the land, for this is one of the oldest parts of the state, and no trace of the wilderness remains. We do not wonder that the Indians hated to see this country pass out of their hands forever, since it is and always has been a beautiful place in which to live.

You will feel much more as if you were taking these journeys if you follow the route on the road map of Minnesota. Make a list of the towns mentioned in this chapter and tell in what county each is located.

CHAPTER XXV

THE RED RIVER VALLEY

In reading this chapter, note the great changes which have taken place in agriculture here and the progress made.

Having left southern Minnesota, we travel rapidly now, mostly toward the north. A long drive through fertile farming country brings us to Kandiyohi County where agriculture is highly developed. As we go along, we notice very fine apples already reddening in the sun, and one farmer tells us that he will exhibit his apples at the State Fair. This county claims one hundred lakes. Every farmer considers his land more valuable when it slopes down to the shore of a deep, clear lake. We pass lake after lake, many of them large ones, which attract the great numbers of tourists who pass us on the road.

At last we reach the flourishing city of Willmar, which is growing in commercial importance, having railroads in several directions. Hogs and cattle are shipped from here, as well as dairy products and wheat. There are machine shops and other lines of manufacturing, although its chief business is the handling of farm produce.

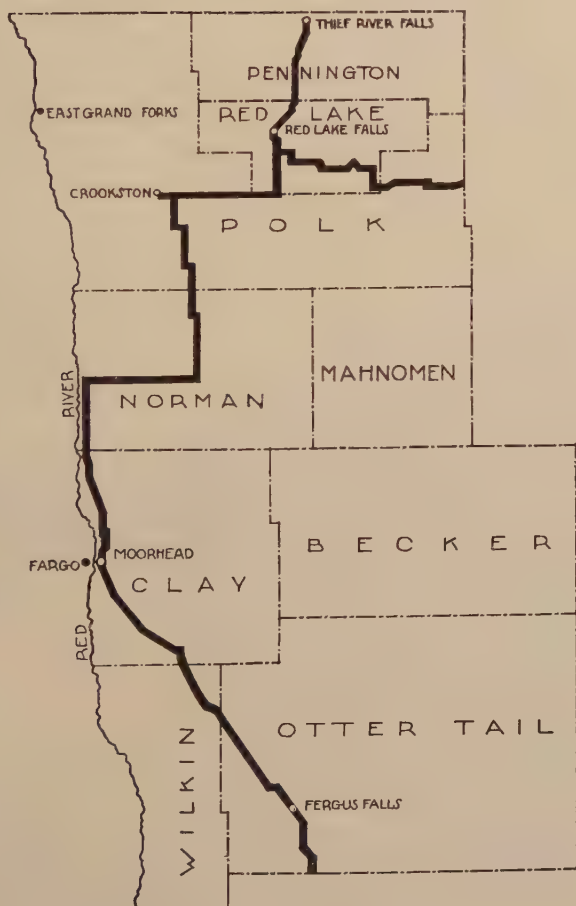
The highway running north from Willmar gives us a view of Green Lake, which we wish to see as Kandiyohi

County claims that this is the most beautiful of Minnesota's ten thousand lakes. With its wooded shores and sandy beaches, it certainly is a beauty spot.

Retracing the road to Willmar, we turn to the northwest, crossing Swift, Stevens, and Grant Counties. The country through which we are passing is rolling prairie, but we often see timber along the streams. Wherever the soil has been recently plowed, we notice how black it is, and everywhere there is a clay subsoil. This is ideal for wheat, which was once the ruling crop and is still important. The various crops now raised, together with livestock and dairying, add greatly to the farmers' incomes.

Now we have entered Otter Tail County and are on the western border of the famous Lake Park Region of Minnesota. Our road takes us through hilly country. Here are the Leaf Hills, some of which rise about 1,800 feet above the sea. At the foot of these rolling hills are almost countless lakes. All this region was crossed by the Great Glacier, and the lakes are of the morainic type. The moraines are easy to recognize when once they have been pointed out to us. Fishing is at its finest, and it is a temptation to stop at some of the numerous lakes, which we are passing. Thick woods border the lakes, which seem to us as beautiful as lakes can be. Otter Tail County, one of the largest in the state, has over one thousand lakes. Although we pass many splendid farms, there is still wild land, making this region much more attractive to tourists, whom we meet everywhere.

THE RED RIVER VALLEY



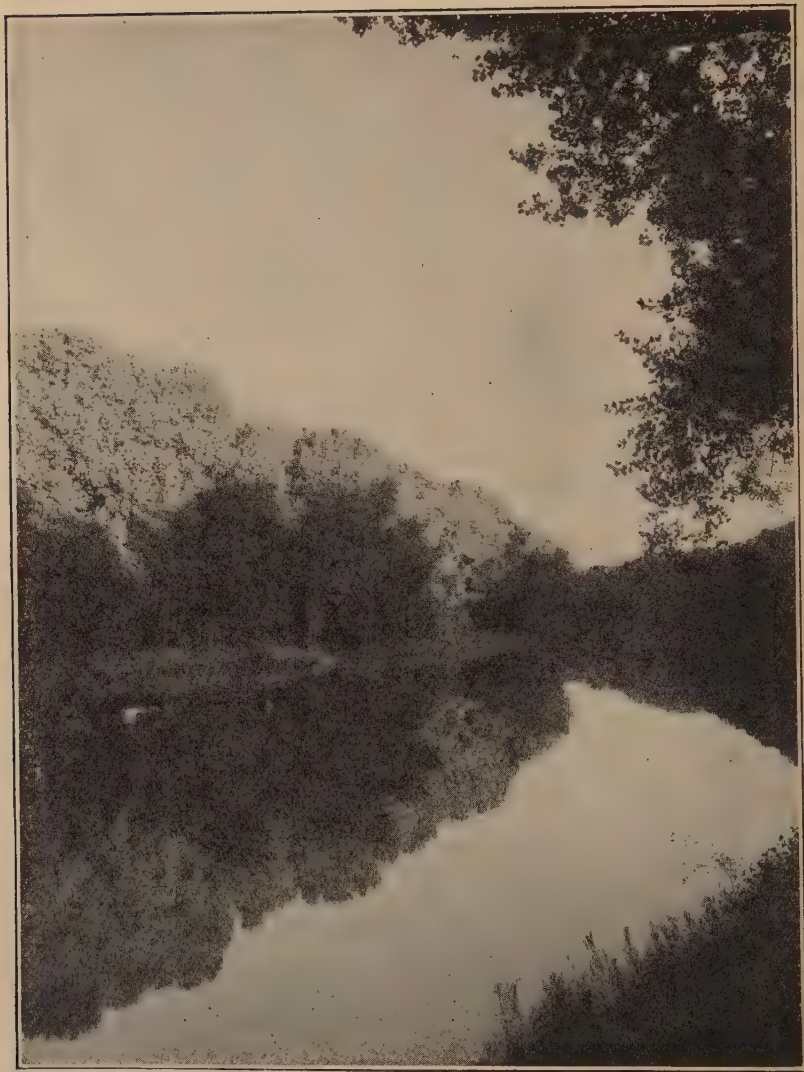


PHOTO BY KENNETH M. WRIGHT

THE RED RIVER OF THE NORTH

Mixed farming is carried on extensively. The abundant dairy products are taken care of by many creameries and several cheese factories.

Fergus Falls on the Red River of the North is in the heart of the lake region and calls itself "The City Beautiful in the Land o' Lakes." Near the city the river falls two hundred feet. We see several dams across the river, where wonderful waterpower has been developed, which is sold to as many as sixty neighboring towns, some of them in North and South Dakota. This power has made Fergus Falls a manufacturing center of rapidly growing importance. There are many factories, including a foundry, woolen mills, a cement silo plant, and a sash and door factory. The city is a trading center for the productive farm region near by. It has a large, modern creamery and is a great poultry market. We drive by another state hospital for the insane, where hundreds of unfortunate persons are cared for. Farms, waterpower, and lakes have combined to make Fergus Falls a thriving city.

We are now bound for Moorhead on the western boundary of our state. To reach there, we cross Wilkin and Clay Counties. Now we are in the Red River Valley, where the land is flatter than any we have ever before seen. You remember that all this region was the bottom of an immense glacial lake. First we see the tops of grain stacks, and, as we come nearer, the whole stacks come into view. The road is good, but on some of the side roads we see the sticky, clayey mud called gumbo.

After a rain, many an auto has been stuck in this thick mud and has had to be pulled out. Unlike other parts of Minnesota this section has few lakes.

Besides wheat we see many other crops, for this is one of the most fertile parts of the world. For some years the farmers have very wisely diversified their farming, instead of raising all wheat. We see great fields of potatoes, and we are told that the farmers sell many of them for seed.

We find on our arrival that Moorhead is on the Red River, directly opposite to Fargo in North Dakota, with



COURTESY OF GREAT NORTHERN RY.

POTATOES IN THE RED RIVER VALLEY

which it is connected by trolley cars. The State Teachers College is pointed out to us and also Concordia College. The city has unusually good railroad connections. Two lines to the West pass through Moorhead, and it is possible to go in many directions by rail. Just to the east of the city are large railroad shops; and in the city we see machine shops and foundries, as well as creameries and a canning factory. Of course we are not surprised to find that the chief products shipped from the city are wheat and potatoes.

Taking the road to the north of Moorhead, we follow the Red River of the North for many miles and cross Norman County into Polk County. Everywhere we see farms and pastures; little wild land is left in this part of the state. As we drive along, we think of the great herds of buffaloes that once found rich feeding grounds in this valley. We wonder if our road may be part of an old buffalo trail worn smooth by the pounding of thousands of hoofs in the spring and fall migrations. Then our thoughts go back to the early traders and explorers, who traveled the entire length of the valley and took back stories of the fertile region to friends seeking new homes. Steamboats once made regular trips on the river. Later, when a network of railroads was built upon the level land to carry millions of bushels of wheat to market, the steamboats were given up.

Now we have left the river and are traveling to the northeast. Soon we come to Crookston, the principal city of the Red River Valley. It is situated on the

edge of the valley in Polk County. The eastern part of this county was once covered with a dense growth of pine and hardwood timber. Lumbering was then the most important industry around Crookston. We see no timber now for it has been entirely cut away, but a sash and door mill consumes lumber brought from a distance.

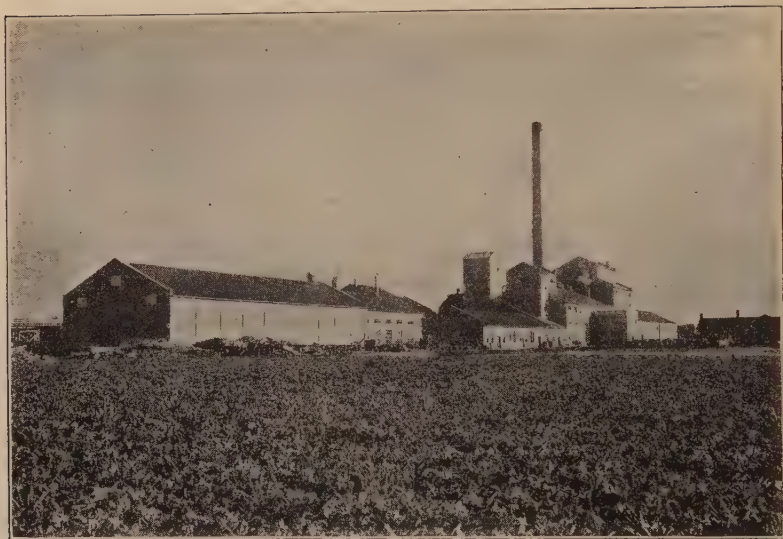
Everyone we meet is well informed on the industries of the neighborhood and very willing to answer our questions. We find out that when the lumber was exhausted, the settlers learned that the soil was unusually adapted to wheat raising. After soil experts had made a study of the region, they agreed that only two other spots in the world equaled it in fertility. These are the Nile Valley in Egypt and the southern part of the steppes in Russia. The "Number One" hard northern wheat grown here is without an equal for bread making flour. This strong wheat, as it is called, is mixed with the weaker wheats grown in other places, where the climate is milder, thus making a better brand of flour.

When this "Bread Basket of the World" became a little less fertile, diversified farming began. Alfalfa, corn, and other grains are successfully grown, and purebred cattle are produced in increasing numbers. Potatoes are raised, and quite recently the sugar beet has become a great crop. The sugar beet, we are told, keeps down weeds, particularly the troublesome sow thistle. Although the farmers have changed from the one-crop plan of farming with excellent results, wheat is likely to remain an important crop.

Our informer tells us that he has been a student at the Northwest School of Agriculture of the University of Minnesota, and advises our visiting the school. A paved road runs from the city of Crookston out to the school and the Experiment Farm. Here grains, vegetables, and fruits are being raised and carefully watched. All through the valley, wide-awake farmers are trying plans suggested by the school, and are accomplishing wonderful results. In fact we learn that this branch of the University is of untold value to the farmers round about.

Visitors are welcomed everywhere in Crookston, so we make a tour of a great mill which turns out flour, breakfast food, and other wheat products like poultry feed and cattle feed. We see creameries making butter and ice cream. A tannery particularly interests us. Here furs and skins are being prepared for market. No doubt this factory is an outgrowth of the early fur trade, for which the valley was once famous. Cheap power has been developed from Red Lake River, so that Crookston not only has enough for her own use, but also sells it to other cities in the Red River Valley.

There is certainly much to see in Crookston, but more than once we are told that we ought to come again in February, to see the famous Red River Valley Winter Shows. Farmers from over a dozen counties exhibit their crops, and lectures are given by farm experts. One citizen points out with pride an immense pavilion, where the cattle, hogs, sheep, and poultry are shown each year. He tells us that a few years ago so few animals were



COURTESY OF GREAT NORTHERN RY.

BEET SUGAR PLANT AT EAST GRAND FORKS, MINNESOTA

exhibited, that they were all displayed in a small garage.

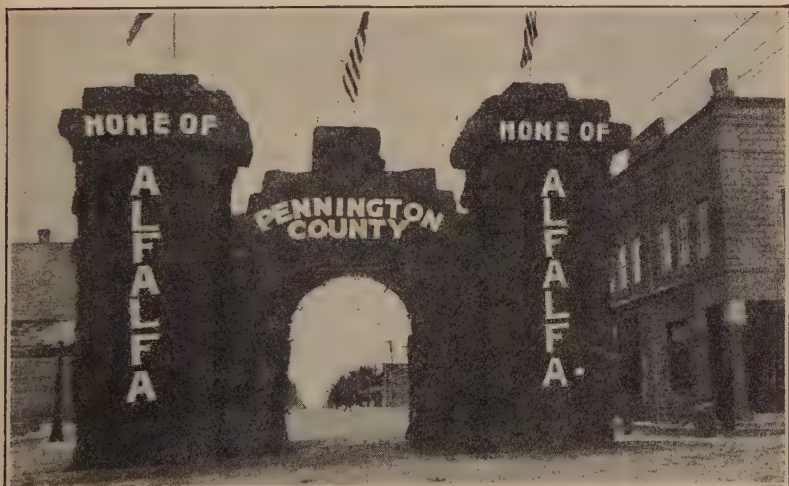
We are told of a large sugar beet factory at East Grand Forks, on the western boundary on the Red River. Since the mill will not be working until the beet crop comes in, we do not go to see it. This factory is a great thing for the farmer, who is assured a good price for his beets at the time of planting. In time, beets may become one of the most important crops of the valley.

There is one more Red River Valley town, which we wish to visit. This is Thief River Falls, which lies to the northeast of Crookston. On our way we pass through Red Lake Falls in Red Lake County. Here we visit a

tow mill, said to be the largest in the world. Tow is the fiber of flax straw, and it is used for stuffing furniture. Thus the flax straw, once considered worthless, adds to the value of the flax crop.

Next we enter Pennington County, one of the last in the state to be formed.

A few years ago this county was poor. The soil was so full of sow thistles that wheat had almost been run out. It was then that farmers began to experiment with alfalfa. Prosperity followed. To celebrate their success, an alfalfa palace was constructed and a mid-winter carnival held. As is always the case, the raising of alfalfa soon brought the dairy cow. On the same feed purebred cattle now bring much larger returns in butter fat than the old scrub cattle which Pennington County



COURTESY OF THIEF RIVER FALLS COMMERCIAL CLUB

once raised. It interests us when an enthusiastic farmer points to a fine church, a school, or even his big touring car, with the remark, "It is all the work of the dairy cow." At the midwinter Alfalfa Day celebration, held every year in Thief River Falls, alfalfa, dairying, and poultry raising are the chief topics discussed.

Thief River Falls, with its well-lighted, well-paved streets, is a wide-awake city. It has good railroad connections and waterpower. Dairy products are manufactured here, and the city also ships grain, flour, and livestock. In the dairy buttermilk powder is also made, a product for which there is a growing demand.

Now we are leaving the wonderful Red River Valley, but we shall not forget its great level stretches of fertile farm land and its high-bred livestock.

As far as the farmer is concerned, what point of similarity do you see between the sugar beet industry and the canning industry?



COURTESY OF MINNESOTA HISTORICAL SOCIETY

AN ECHO FROM THE PAST

CHAPTER XXVI

THE UPPER MISSISSIPPI

Read to find out about the cities which have harnessed the water-power in the Father of Waters.

Our goal is now the headwaters of the Mississippi, toward which we journey in a southeasterly direction. We are crossing Clearwater County, in the southern part



COURTESY OF J. P. WENTLING

THE UPPER MISSISSIPPI NEAR BEMIDJI

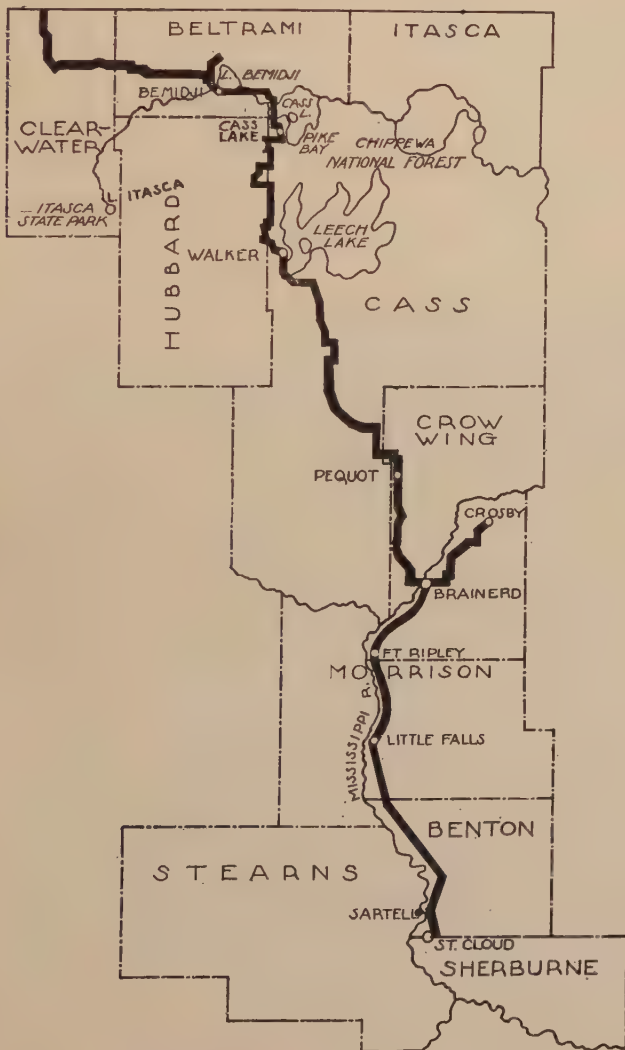


CURTIS—FOR NORTHERN PACIFIC RY.

LAKE BEMIDJI—THIS LAKE IS A WIDENING OF THE MISSISSIPPI RIVER

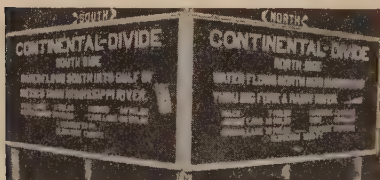
of which lie Lake Itasca and the larger part of Itasca State Park. At last we reach the Mississippi at Bemidji, where the river widens out forming beautiful Lake Bemidji. This pleasing Indian name means Cross Lake, so named because the river crosses the lake and comes out on the other side. Old Chief Bemidji, a Chippewa chieftain, was a true friend to the early settlers. He is buried on the shores of Lake Bemidji. Over his grave, the citizens of Bemidji have erected a beautiful

THE UPPER MISSISSIPPI



monument, in gratitude for his kindness during the hardships of pioneer days.

In our ride around the lake we see charming summer resorts. Besides pine trees, we notice many other kinds of trees; the white birch adds to the beauty of the shore. The Bemidji State Teachers College is pleasantly located, the grounds sloping down to the lake.



CONTINENTAL DIVIDE—HIGHWAY
61 IN ITASCA COUNTY

Until recently Bemidji has had its great lumber mill, but, with the cutting down of the forests, this has been closed. We have an interesting trip through a box factory, which uses small, low grade lumber; we are

invited to inspect a creamery also. West of the city is a plant which prepares peat, so that it can be used as fuel. Among the smaller lines of manufacturing is the production of woolen goods.

We are advised to drive north of the city to Lake Julia. Near the shore of this lake is an old hotel. It is said that this hotel is located so exactly on the continental divide, that from one side of the roof, the rain runs down toward Hudson Bay and from the other to the Mississippi, which carries it to the Gulf of Mexico. The lake is about 1,400 feet above sea level. Bemidji is in Beltrami County. Beltrami was an Italian, who explored with General Long, the leader of an expedition to find the source of the Mississippi. When Beltrami found Lake Julia, he

thought that it was the source of the Father of Waters. Strangely enough, this lake does not drain into the Mississippi at all, but its waters flow at last into Hudson Bay.

In the country through which we are passing, we see Indians picking raspberries. The berries are very large and of delicious flavor. We are told that there is a small cannery in the neighborhood.

A long and delightful trip is before us to Brainerd, a city of the upper Mississippi, but much farther south than



PHOTO BY KENNETH M. WRIGHT

A CAMP IN THE CHIPPEWA NATIONAL FOREST ON CASS LAKE—
NOTICE THE FINE NORWAY PINES

Bemidji. Following the river quite closely, we pass through the Chippewa National Forest on the shores of Cass Lake, also a widening of the Mississippi. As we look at the grand old Norway pines, said to be the finest in Minnesota, we are glad that they are protected by the government from the hand of the ruthless lumberman. On the shore of Pike Bay, the name given to the southern part of Cass Lake, we stop to visit a silver fox farm. We call to mind the explorer, Pike, and the hardships he endured on his winter trip to this region.

Leaving the course of the river, we strike south and pass Leech Lake, one of the largest lakes in the state. It is early morning, and the fragrant odor of the pine trees is in the air. In the open fields are gorgeous wild flowers. Great patches of asters, goldenrod, and fireweed blaze in the sunshine. Now we have left Hubbard County and have reached Walker in Cass County. Here we see the State Sanitarium, where many people suffering with tuberculosis have regained their health. Wild land often adjoins cultivated farms. Frequently we notice fine potatoes being dug in the fields.

Now we have entered Crow Wing County, and everywhere are lovely glacial lakes. Here we see a flock of birds feeding on the wild rice. Hardwood trees are mingled with evergreens, and beautiful clumps of white birch stand out against the dark pines that border the lakes. When we pass through Pequot, we read in our guide books that within fifteen miles of this little place are more than one hundred lakes.

We come to the Mississippi again at Brainerd, "The Hub City," located exactly at the geographical center of Minnesota. The dam across the Mississippi, where power is produced, is one of the first things we notice. A large paper and pulp mill stands on the banks of the river and uses some of this waterpower. This city once manufactured much lumber. We see a sash and door factory, creameries, and other manufacturing plants. Brainerd is the principal railroad center of this region, and there are large repair shops here.

Brainerd claims to be the gateway to the Ten Thousand Lakes district, although as we know, several other cities make the same claim. Within easy driving distance are over seven hundred lakes. Situated on the high east bank of the Mississippi, is one of the finest tourist parks in the state, where tourists are well taken care of.

In the wild country near Brainerd blueberries grow in abundance, and at times the city ships quantities of them.

Our visit would be incomplete without seeing the Cuyuna Iron Range, with its open pit as well as its underground mines. We drive as far as Crosby, which is the metropolis of this range and a charming village also. Only a few years ago these wonderful iron deposits were unknown, and no one yet knows the full extent of this mineral wealth.

Taking the road to the south of Brainerd, we pass by what is left of old Fort Ripley, a stronghold of Indian days. Unlike Fort Ridgely this fort has no bloody history. Built in the early days, on the border land between

the hostile tribes of the Sioux and Chippewas, it protected the pioneers who settled in the neighborhood. During the terrible Sioux Massacre of 1862 settlers flocked to this fort. Possibly the few troops here at Fort Ripley influenced the Chippewas to remain friendly to the whites.

Our next stopping place will be Little Falls in Morrison County, once an important lumber center. At times in the past years the lumber business of both Brainerd and Little Falls was mentioned along with that of Stillwater and Minneapolis. With the passing of the lumber industry in both Crow Wing and Morrison Counties, farming began to come into its own. The farmers engage in diversified farming and give their main attention to dairying. Where wheat was once grown extensively, immense crops of alfalfa and other fodder crops are now raised. Much corn is produced and is stored away in the many silos along our road. Hogs are raised profitably, and sheep are valuable not only for wool and meat, but for clearing the land. The great fields of clover have caused the honey industry to become quite a side line. Besides the delicious wild berries, which taste very good to us, both strawberries and raspberries are cultivated and find a market in the cities or among the tourists.

We follow the Mississippi in its course across Morrison County. This county was named for William Morrison, that old scout, who was the first white man to see Lake Itasca. Little Falls is one of the most attractive and enterprising cities which we have visited. Built here on account of waterpower, the town owes its name to the

falls in the Mississippi at this point. At present there are two great dams and two hydro-electric plants furnishing power not only for the city, but for places on the Iron Range beyond Duluth. Here the Mississippi flows over a solid foundation of slate and granite, which makes the waterpower plants unusually safe and substantial.

Although much of the prosperity of Little Falls is due to the rich farming and dairying country with which it is surrounded, it has become quite a manufacturing center. Besides several creameries we see among the industrial plants large paper pulp mills, flour mills, and a pickle factory. Roofing, tile, and cement are made here. We admire the black granite, which is the finest of its color in America. We see the rough stone, which has been quarried near by in Morrison County, smoothed and polished at a finishing plant in Little Falls.

Here are modern and well-equipped schools, and the wide streets are paved and lighted. Forty acres of natural forest land have been given to the city, on condition that this little forest be preserved in all its original beauty. The winding road, shadowed by towering pines, invites us into the grove. Except for this road the forest is unchanged by the hand of man.

Little Falls has railroads in all directions, and the paved Jefferson Highway joins this city with Minneapolis and St. Paul. Four miles down the Mississippi from here, we come to the spot where Pike built a blockhouse on his way up the river. This blockhouse and other log buildings were enclosed with a strong palisade. In Pike's

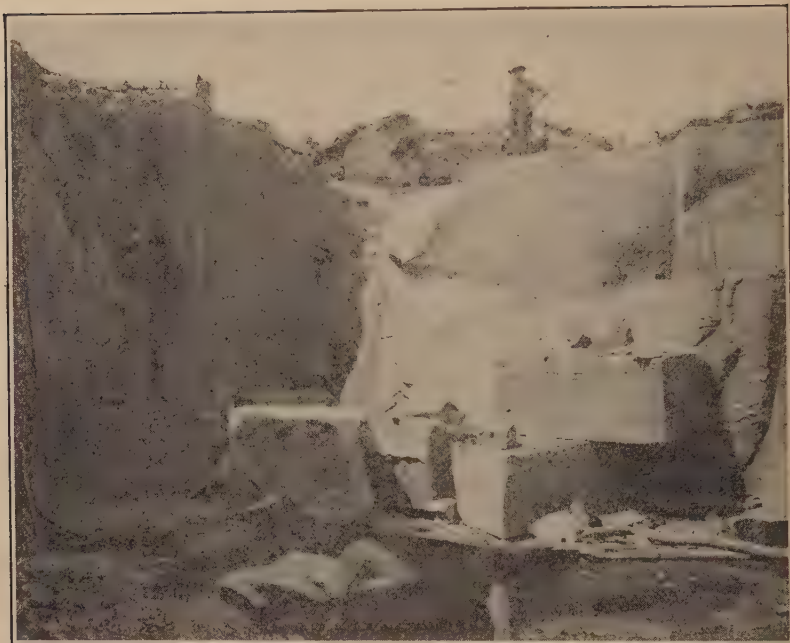
journal he says that he "would have laughed at the attack of eight hundred or one thousand savages," if all his men were inside. Marking the place is a tablet given by the Daughters of the American Revolution. As we read the inscription, we think of the great bravery of this young explorer, who did his part in developing Minnesota.

A large power plant has been built on the rapids in the river at this point, known as Pike Rapids. A modern device, which constantly releases compressed air near the river bottom, prevents the water from freezing. This plant sends power to towns on the iron ranges. Indian mounds, which date back to a much earlier period than that of Lieutenant Pike, are to be seen in the neighborhood.

Our road leads south and is never far from the Mississippi River. After a long drive we reach Sartell, where the river furnishes power for a large paper mill. We are told that the making of paper from wood requires so much power that it does not pay unless the power can be cheaply obtained. This plant turns out a high grade of newspaper and book papers. Since wood to be made into pulp should have no pitch, spruce is very suitable. We see the long logs entering the mill, where they are cut into short lengths. After the bark has been removed, the logs are ground into pulp, which looks like cooked breakfast food or mush. Several other materials besides the woodpulp are loaded into the great vats. After thorough mixing, a machine rolls the pulp into great sheets. It is certainly a wonderful process.

Now we are in Stearns County, which claims to be one of the four richest counties of the state. It is easy to see what has produced much wealth. "Her Majesty, the Dairy Cow," as the citizens of Stearns County say, has earned the large bank deposits, of which they are very proud. We see purebred cattle and acres of alfalfa and red clover. Great fields of corn also attract our attention. Butter is turned out by many creameries, although much cream is also sent to St. Paul for butter making.

In the midst of this wonderful farming country is the city of St. Cloud, often spoken of as the "Granite City." Fifty quarries may be found in the neighborhood of this city, and it ranks second in the world as a granite producing center. This rock may be seen in several different colors. At the quarry which we visit, a handsome light grey variety is being cut. We are told that this granite is an extremely old formation. Ages ago the minerals, of which it is made, were melted together and then cooled off very slowly far beneath the surface of the earth. Fortunately, the glacier has taken away most of the great thickness of earthy material under which the granite lay buried, or man might never have learned of its existence. After much experimenting, the granite is now cut with very little waste. We watch the gang saw at work. The teeth of the saw, kept cool by flowing water, press chilled shot against the hard stone and make a thin cut. The shot is used over and over until it is worn out. The granite polishing works also prove interesting. Carborundum, a substance manufactured at Niagara Falls,



COURTESY OF *St. Cloud Times*

GRANITE QUARRY AT ST. CLOUD, "THE GRANITE CITY"

ranking next to the diamond in hardness, is used in the polishing process. After receiving a brilliant finish, the granite shines in the sunlight. None of the rock is wasted, for the small pieces are made into paving blocks, and the scraps are crushed for road building.

St. Cloud is situated on the Mississippi, and the falls in the river furnish electric power, some of which is sold to the towns near by. Once noted for making lumber, the city now has many lines of manufacturing. We see

large car shops and stop to watch the iron workers. Brick is made here, and there are also busy foundries and wood working factories. Here is a factory turning out washing machines. Another factory which manufactures parts of motors for repairing purposes claims to be the largest of its kind in the world. The city has flour mills and also a large canning plant. Here we see corn husked and cut from the cobs, all by machinery. The husks and cobs are then ground up to be put into silos, to feed the livestock kept on the farm of the company owning this cannery. Beans, tomatoes, pickles, and sauer kraut are all packed in this establishment. There is a woolen mill also in St. Cloud, so we see that the city provides for man's three great needs—food, clothing, and shelter.

We drive by the State Teachers College, which is pleasantly situated near the river. Here more students are prepared to teach, than at any other college of the kind in Minnesota.

An imposing granite wall, built by the prisoners, surrounds the State Reformatory. The cold grey stone is quite forbidding, but when we go inside, we find that the inmates have much done for their comfort. Young people from sixteen to thirty, who commit crime for the first time, are sent here, where they can learn a trade. Many of them go out into the world and become useful citizens.

St. Cloud is certainly a city in which Minnesota may take great pride. In fact, we are convinced that all the towns of the upper Mississippi play an important part in the industrial life of the state.

Minnesota leads the world in the mining of iron ore, but the Minnesota dairy cows in a recent year produced as much wealth in twelve weeks as the Minnesota iron mines did in twelve months.

Governor Theodore Christianson (1928)

Following the Mississippi north from St. Cloud, name the cities mentioned in this chapter as they come on the map. Tell something of interest about each.



COURTESY OF *The Farmer*.

"HER MAJESTY THE DAIRY COW"

CHAPTER XXVII

THE ST. CROIX AND THE ST. LOUIS VALLEYS

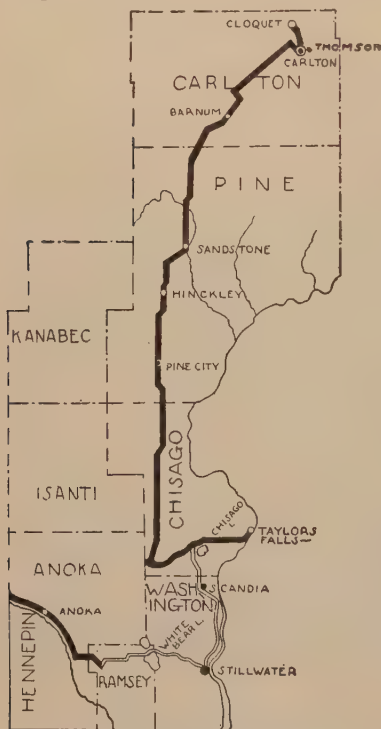
Read to learn what important industry has been developed in Minnesota because of its forests.

We shall continue our sight-seeing trip to the south-east of St. Cloud, and cross Sherburne and Anoka Counties. Both of these counties are located in the famous "Potato Belt" of Minnesota. Here potatoes are a very important and a very profitable crop. The soil, a light sandy loam, is particularly adapted to the raising of potatoes. Raised in this soil, the potatoes seem to have a better taste and to keep better, than when raised on a richer black loam soil. All along the road we pass farmers who are taking their potatoes to the railroad for shipment. At the stations we see long lines of freight cars receiving load after load of potatoes from the farmers' wagons. Great warehouses are being filled also. Starch factories in Anoka, Isanti, and Chisago Counties are busy making starch from potatoes.

For many years the farmers of this region thought that clover could not be grown on this sandy soil. By experimenting, they have succeeded in raising very fine clover.

They devote much time to stock raising, and there are several creameries here.

Near Anoka we see brickyards, which are among the largest in the state.



THE ST. CROIX AND THE ST.
LOUIS VALLEYS

Soon after leaving Anoka we strike to the east, our road taking us by several fine lakes. One of these is White Bear, the summer playground of the city of St. Paul. We are now approaching Stillwater. Before we reach the town, we see the St. Croix River and the surrounding bluffs, through which our road winds. The view of the valley is wonderfully beautiful, and the citizens of Stillwater claim that it rivals in beauty the Rhine Valley in Germany, and the Hudson in New York. The city is situated on Lake St. Croix, which was formed in the same way as Lake Pepin,

the river below the lake being dammed by deposits of silt.

In the early days logs were floated from the great forests of white pine in the St. Croix Valley to the saw-

mills of Stillwater. When the valley had been cut over, the sawmills stopped running, but the abundant water-power has developed manufacturing along various lines. Not only a flour mill and creameries may be seen, but sash and door, clothing, and shoe factories as well as forge shops are also found in Stillwater. Ample railroad connection makes it possible to market its manufactures and to bring in raw materials. Being located within twenty miles of the Twin Cities is an advantage in many ways.

Of course we visit the State Prison in South Stillwater. This is considered one of the finest in the country. It overlooks the St. Croix, and the ground in front of the prison slopes down to the river. The buildings are absolutely fireproof. The two industries carried on here are the manufacture of binding twine and farm machinery. Much of this twine is used in binding grain on the Minnesota farms. We visit the library and look into the school room, and we also listen to the orchestra. It seems to us that the state is giving the prisoners a chance which many of them have never had before. Their labor helps to pay back to the state the cost of the prison and its operation. However, a better result of this employment is that it leads many of the prisoners to make of themselves useful citizens. Mere punishment would never accomplish this result.

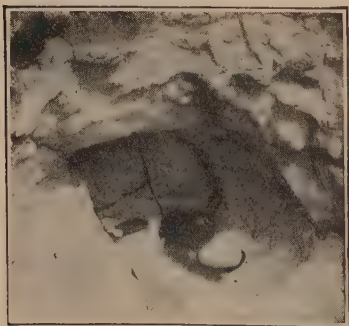
In the warehouse of the prison we see great bales of sisal labeled "Yucatan, Mexico." This is the raw material used in making twine. We are interested to hear that some

of this has recently been brought to Stillwater by way of New Orleans by an all water route. In this way the price of the twine is considerably lessened. The National Government is now improving the navigation of the St. Croix and Mississippi Rivers.

Although Stillwater never fulfilled the dream of its early settlers in becoming the greatest city of the state, we all agree that it is a most delightful little city.

After following the St. Croix River along the Scenic Highway for some miles, we make a slight detour. At the request of some of the party we drive to the little town of Scandia. This rich farming country was settled by Scandinavians. The state owes much to these sturdy people who aided greatly in its development. Our road leads us near a monument which has been erected in memory of the first Swedish settlers in Minnesota. After viewing the monument our party turns back to the St. Croix River.

Before long we come to Interstate Park, which is so called because it has been set apart by both Wisconsin and Minnesota. It lies on the two sides of the river. For a mile and a half the river flows through a canyon with steep sides, which is known as the Dalles of the St. Croix. This region has many strange rock forma-

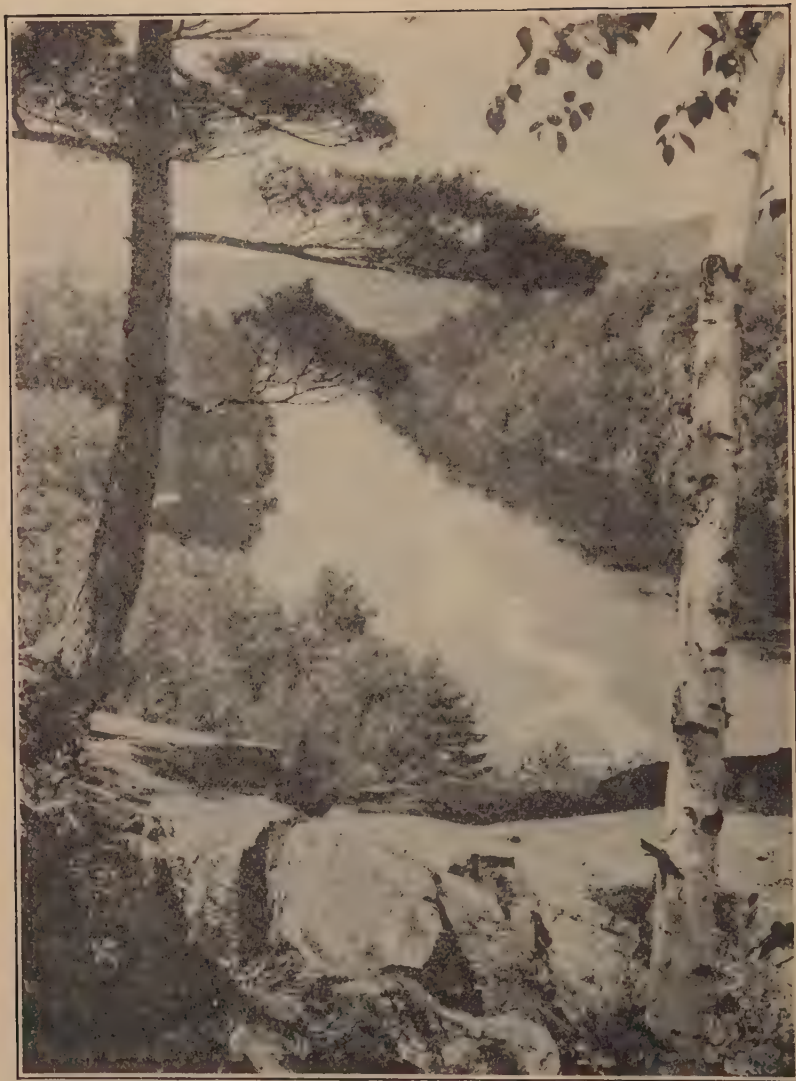


POT HOLE AND GRINDER—
INTERSTATE PARK



MONUMENT TO THE FIRST SWEDISH SETTLERS
IN MINNESOTA—SCANDIA

tions, and is sometimes called the Switzerland of America. The pot holes interest us greatly. We are told that these were formed by the action of the whirlpools in the rapid river. Stones kept in motion by the swiftly running water have bored these great round holes in the river



COURTESY OF TEN THOUSAND LAKES OF MINNESOTA ASSOCIATION

DALLES OF THE ST. CROIX—THE SWITZERLAND OF AMERICA

bed. Often the grinders which made the holes may still be seen. Some of the pot holes are large enough to hold several persons; the largest is called the Devil's Kitchen.

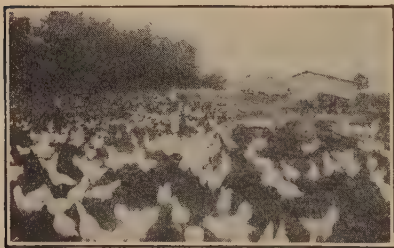
Just north of Interstate Park are situated Taylors Falls, on the Minnesota side of the river, and St. Croix Falls, directly opposite in Wisconsin. At this point we see the large power plant, from which power is transmitted to the Twin Cities. The yellowish color of this otherwise beautiful fall is due to the tamarack swamp higher up the stream.

Leaving Taylors Falls, we travel westward through the wonderful lake country of Chisago County, in order to reach the road which will take us north. When we come to the western part of the county, we are again in the Potato Belt. At the stations along the railroad we pass huge potato warehouses; and we see starch factories, which are just beginning their busy season.

As we go north, we enter Pine County. At the time this county was organized, it was located in the great pine region of Minnesota. The first white men to settle here cut their homes out of the forest. After a great part of the lumber had been cut, fire swept over a large portion of the county, destroying everything in its path. When we pass through the town of Hinckley, it is hard for us to realize that this flourishing farming center was once visited by one of the worst fires the state has ever known. Potatoes grow well in Pine County, and alfalfa and clover are great crops. Cooperative creameries have brought success here as elsewhere. Pine City claims to

have one of the best in the state. Chickens also have added to the farmer's income. We notice beehives near many farmhouses. Honey production is common since clover is abundant, and farmers find the keeping of bees profitable here.

At Sandstone we see one of the largest stone cutting plants in the United States. Here the Kettle River sandstone is cut and shaped. The citizens tell us with pride that the product of their quarries has been used to construct a building in Spokane, Washington, and another at the University of Illinois.



COURTESY OF MAPLEWOOD POULTRY FARMS,
BARNUM, MINN.

CHICKENS HAVE PUT BARNUM
ON THE MAP

has its chickens.

Now we have entered Carlton County. The highway takes us right through the town of Barnum. Lumber once provided a living for its people, but now it lays claim to being the second egg producing center of the world. Nearly every home

Nature has provided enormous waterpower in this part of the state. At Thomson the course of the St. Louis River has been changed, and the river has been made to generate many thousands of horsepower of electrical energy. The plant, which we see here, furnishes a large part of the power used in Duluth and Superior. Near the towns of Carlton and Thomson we see beds of slate. At

Thomson the wild, picturesque gorge of the St. Louis River is lined with rugged rocks. In the west this would be called a canyon. People whom we meet refer to the St. Louis River proudly as the source of the St. Lawrence.

Most of Carlton County has very rich soil, and with abundant rain it can grow all kinds of vegetables and small fruits. In time it will no doubt supply great quantities of vegetables, small fruits, poultry, and dairy products to the people of Duluth and Superior.

Now we are approaching one of the most enterprising and wide-awake cities of the state. Cloquet is a wonderful city, and in some ways there is no place like it in the world. The St. Louis River has a fall of ninety feet within the limits of Cloquet, and much waterpower has been developed. Completely wiped out by forest fire in

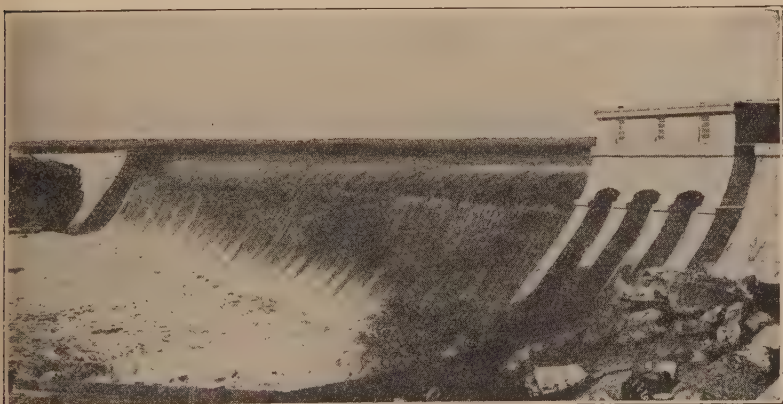


PHOTO BY GALLAGHER, DULUTH

POWER DAM AT THOMSON ON THE ST. LOUIS RIVER

October, 1918, Cloquet's buildings are all new and substantial. Its inhabitants are proud of its paved streets, its white way, and its schools and churches, all of which show a spirit which cannot be conquered.

Cloquet is one of Minnesota's leading industrial centers. It claims to be the only city in the state devoted entirely to manufacturing, and the only lumbering town which is certain of a prosperous future for many years to come. When the woods which supplied the Minneapolis sawmills were cut off, Cloquet became the largest manufacturer of pine in the state, and held that rank for years.

Before the destructive fire of 1918, logs to supply Cloquet's sawmills were giving out. When the town was rebuilt, it was plain that the sawmills could not keep busy much longer. Wealthy mill owners found out by costly experiments that useful products could be made from what had always been regarded as forest waste. These products had a good market value. By the old methods of lumbering little more than one third of the wood in a tree ever entered the sawmill, and only one fourth came out to be sold. With the new methods used at Cloquet, the manufacturers hope to turn one hundred per cent of the tree into some useful form. Already they have nearly reached their aim. Here, as in all lumber towns, the mill waste was formerly burned. Now the trimmings, shavings, and even the sawdust can be used.

Strong boards are made from waste and also a material known as balsam wool, which offers such great re-

sistance to heat and cold, that it has proved very valuable. This is used in the walls of buildings to insulate against heat, cold, and sound. A refrigerator company in Cloquet, which uses balsam wool, claims to make ice-boxes, which will keep a temperature four degrees colder than any others sold. We visit the plants where balsam wool is made and see the shredded wood being cooked in chemicals to loosen the fiber. When we examine the finished product, we might easily imagine that it had come from a sheep's back.

Next we visit one of the largest paper mills in the country. This mill uses such woods as poplar, birch, tamarack, and jack pine. Some of these woods were formerly considered worthless, or almost worthless, and were often burned off in order to clear land. These trees do not need to grow to their full size, since quite small wood can be used in a pulp mill. Spruce and balsam are also made into paper. We see powerful machines cutting up the wood into tiny pieces. This wooden hash is treated with chemicals, and various substances are added to it, among them, clay, brought from England by boat to the head of Lake Superior. Finally we see the finished sheets of paper coming from a machine. A beautiful white book paper is made from poplar, with a little birch added, and a strong, good-looking wrapping paper is made entirely of jack pine.

We go to another factory where we see clothespins and toothpicks being made from small white birch. This plant also turns out doctor's supplies. The next time we

have sore throat, we shall wonder if the little flat stick, with which the doctor presses down the tongue, came from Cloquet. Another factory turns out railroad ties and fence posts.

It will be impossible to visit all of Cloquet's wood working factories, but we must see a box mill. We are told that the short pieces of wood which are being unloaded have come from the sawmill. We watch these as they are sorted by machinery, according to length and width, and dropped into bins. Narrow strips are glued into one wide, strong board. All sizes of crates and boxes are manufactured, mostly to contain foods. The pieces are all carefully made, even to the labeling. These are not nailed on account of the extra cost of shipping the bulky finished boxes, but are shipped "knocked down" to the users. It interests us to see the names of well-known firms in Boston and other eastern cities stamped on some of the boxes.

Without a trip to the Cloquet Forest Experiment Station, which is three miles west of the city, our visit would be incomplete. Some years ago several lumber companies of Cloquet presented the state with over two thousand acres of land for the starting of a forestry station. This land was largely cut over. The forestry expert who is in charge explains to us how it will be possible to keep up a perpetual supply of trees for the factories of Cloquet. He tells us that, when the Norway pines are cut, there is usually a strong growth of jack pine. This reaches a useful size in twenty to thirty years whereas it takes

seventy years or more to produce a new crop of Norway pine. The jack pines protect the young Norways, so that they get a better start.

We are shown beds containing thousands of pine seedlings of different ages. Wooden slats protect the tiny trees from the sun, and chicken wire keeps off the birds. The blackbirds, particularly, like to eat the pine seeds. After two years in the seed bed and two years in the transplanting bed, the little trees are ready to plant in the forest. The forester tells us that although nature does a great deal of re-planting, one million pine and spruce seedlings have been shipped from this station in a year. The station has also attended to the planting of windbreaks on farms and to the caring for them. Farmers of the neighborhood are urged to start wood lots. They are taught by expert foresters, how to select the trees for cutting. In this way paying work is provided on the farm in winter. We are very glad to have seen this station, which is operated by the University of Minnesota. It is one of the few of its kind, if not the only successful one, in the United States.

Nowhere else in the country is there such a complete use of all timber products and so little waste, as in the industries of Cloquet. In time there may be almost as little waste in this wood working business as in the packing industry. What is being accomplished at Cloquet can be accomplished elsewhere in Minnesota. It seems to us that there is now little left to attempt in the way of wood industries in our state. Will Minnesota ever produce

great quantities of silk fiber from its spruce, as Connecticut is doing? This has been suggested by a resident of this part of the state, who is much interested in the development of our forests along new lines.

We appreciate the meaning of Cloquet's slogan, "A growing crop on every Minnesota acre," also the green pine tree, which always appears with these words. Cloquet claims that a visit there is worth while, and we certainly agree. We are proud to know of another line in which Minnesota leads the nation. Whenever we look at the map of Minnesota, the great development along the St. Louis River will come to our minds. It is a wonderful example of how industry can be adjusted to the changes in natural conditions.

Paper making began in very early times. Have you ever heard of the papyrus of the ancient Egyptians? Some of the old European countries, where forests are scarce, raise a sort of grass for paper making. Shall we be obliged to do likewise or will our forests supply our needs? Name as many Minnesota cities as you can which make paper. Name several Minnesota trees which are used for pulp wood.



A GROWING CROP ON
EVERY MINNESOTA ACRE

CHAPTER XXVIII

THE NORTH SHORE OF LAKE SUPERIOR AND THE INTERNATIONAL BOUNDARY

We shall now read about our northern boundary over which there has been much dispute but never war.



THE NORTH SHORE OF LAKE SUPERIOR AND THE
INTERNATIONAL BOUNDARY

Our road now leads to Duluth; and, as we near the city, we see the great hills, which form the rim of Lake Superior. These hills were made by a mighty lava flow and are sometimes called mountains. We have seen the city at the head of the lake, so we continue our journey without stopping for any length of time. Now we are on the far-famed North Shore Drive, with the pleasant prospect of traveling for several hours on a good road with Lake Superior almost constantly in view.

This is St. Louis County, the largest in the whole state of Minnesota; its area is much larger than the state of Connecticut. The county has two Experimental Stations, which work under the University of Minnesota. From these stations experts go out to help the farmers with their problems. Sheep do well here and are very useful in clearing cut-over land. Dairying has proved a great success, and we are told that purebred cattle are kept everywhere. Potatoes are at their best. It is claimed that vegetables, hay, and root crops grow more in twenty-four hours in St. Louis County, than in that number of hours in California. The long days, with plenty of rain, cause this unusual growth. The county is proud of its agricultural exhibits and the prizes which it has taken at the State Fair, where it has its own exhibition building.

After riding about thirty miles, we arrive at Two Harbors which owes its interesting name to the double harbor which nature has formed here. Only one of the two indentations is now used. This is Agate Bay, the name by which the town was formerly known. In the harbor

stands a finely equipped lighthouse. Here are several of the biggest ore docks in the world, and also great coal docks. In 1884 Two Harbors became the first shipping point for Minnesota iron. The city is located at the end of a valley through which a railroad brings the ore to the lake shore and has become a business center for the region round about. The town is set back some distance from the lake, since the shore line is owned by mining companies, chiefly of the Mesaba Range. We are much impressed by the enterprise of Two Harbors, its fine public buildings, and well laid out streets.

Lake County, in which Two Harbors is located, is known as the "Land of the Big Red Clover." We see pink and white clover also, and now and then we see beehives. Although the soil is very productive, the glacier left so many boulders here, that they have been used in building stone walls, which take the place of fences. When we see these walls, some of us who have been in New England are strongly reminded of that part of the country. As we continue our way, Lake Superior broadens out. We gaze over the blue water, unable to see land on the other side. If one were suddenly set down on the lake shore, he would certainly think that the ocean lay before him. The rolling waves and rocky shore add to the impression. We pass fish trucks, and on the lake we see little steamers collecting the fish, which the fishermen have caught. In the course of a year the North Shore ships great quantities of fish. Without going far out of our way, we pick some fine wild raspberries and



SPLIT ROCK LIGHTHOUSE ON THE NORTH SHORE OF LAKE SUPERIOR

blueberries, which seem to us much more delicious than any we have ever before eaten.

We pass by Split Rock Lighthouse, which was built at a dangerous point on the rocky shore. Ships have been wrecked here. Our course goes by Beaver Bay, one of the oldest towns in Minnesota. A little later we come to Little Marais, from which a highway leads to the northwest through the great Superior National Forest.

On our way we have crossed many little rivers flowing down into the lake. Many of these have beautiful little falls. At Lutsen we find the falls have been harnessed and are furnishing power to light our hotel. We wonder how this place would look in winter. The proprietor tells us that although Lake Superior never freezes over, ice often forms for some distance out. Later this ice

breaks up and is piled up by the wind and waves, forming a high ice wall along the shore.

To the north we can now see the Sawteeth Mountains. The summits stand out like the teeth of a great saw. Alternate hard and soft layers of rock were tilted and then worn away, causing this regular formation.

We leave our automobiles to visit the Thomsonite Beach, and some of the party are fortunate enough to pick up a few of the thomsonites. These stones, when cut and polished, make beautiful settings for rings and pins.

Grand Marais is finally reached. A lighthouse makes the approach by water safer. We enjoy this town with its pine trees, and we are much interested in the Indians. The many fishermen near here lead a life full of hardship; they are brave, sturdy men. When we look at the map, we feel far away from our homes, but a fine school building shows us the progressive spirit of this remote part of the state. While here, we see the first silver black fox farm in Minnesota, still in operation.

Since we are quite near to Grand Portage, which is located near the most eastern point of Minnesota, we are anxious to visit this historic old spot. Our road maps show that it lies some distance from the much traveled highway, in the Grand Portage Indian Reservation. As we are told that the trip would be a difficult one, and that Minnesota's oldest settlement is now only an Indian fishing village, we decide to turn back.

Our goal is now the northern boundary of the state,



COURTESY OF MINNESOTA HISTORICAL SOCIETY

WIGWAM NEAR GRAND PORTAGE—MRS. TAMARACK AND MRS. SPRUCE

and, after much traveling, we reach International Falls in Koochiching County. This city is situated on the Rainy River, across which a great dam has been built. The power for the great industry of International Falls, the manufacture of paper, is generated here. The immense paper mills, ranking among the largest in the country, made possible this magnificent little city, which is the pride of all its people and one of the wonders of the state. Besides several kinds of paper insulite, which is used in the walls of buildings, is made from the paper mill waste. Near the pulp mills we see a mountain of

logs. No one can conceive of the great size of this pile without having seen it. There is still enough large timber in the forests round about to feed a sawmill.



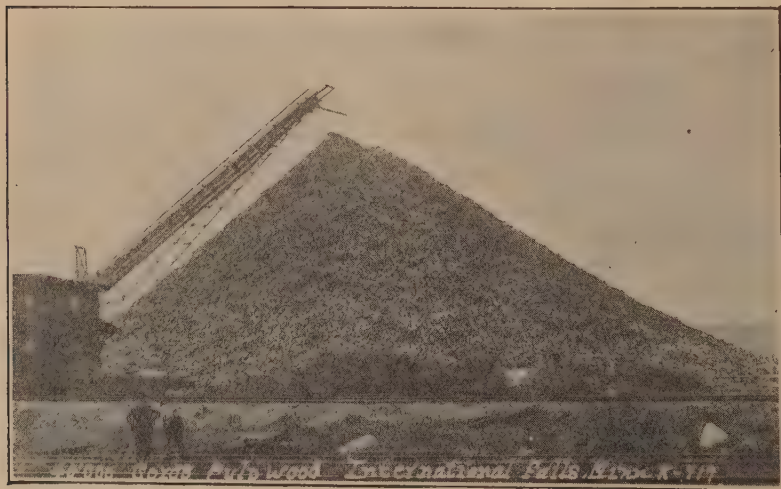
PAPER MILLS AT INTERNATIONAL FALLS ON THE RAINY RIVER
NOTICE THE PILE OF PULP WOOD IN THE DISTANCE

Several fine hotels take care of the tourists, who visit here in the summer months. A wonderful tourist park lies among the pines near the Rainy River. With its hot and cold baths, electric lights, and screened-in cook camps, we are supplied with every comfort. Only three miles away is a State Fish Hatchery, so there is no lack of fish in the lakes and streams.

The schools of International Falls are equal in equipment to any found in the state, and the city is justly proud of them. This impresses us as all the more wonderful, for not many years ago, our northern boundary

was a wilderness. We are surprised to learn that Minnesota, as well as some of the western states, has had its gold rush. Some twelve miles east of International Falls may be seen the deserted ruins of a fair-sized town, built and occupied for a time by the gold seekers. Although their hopes were not fulfilled, some of the hardiest of the pioneers settled in this part of the state. It is safe to say, that the development of our northern frontier was in this way hastened by several years.

The vast waterpower possibilities of the Rainy River attracted some of the disappointed ones, and it was not long before the town of Koochiching, later re-named International Falls, had been laid out. Soon the rushing waters were harnessed, and the forest was turned to the use of man. Thus a greater treasure than gold was found.



We all wish the experience of visiting a foreign country, so we cross the river to the Canadian side. At the middle of the bridge, we come to a closed gate with a little house beside it. This gate is the dividing line between the United States and Canada. A Canadian customs officer steps out of the house, asking who we are and where we are going. When we answer that we just wish to go over to Fort Frances for a little while, he takes our names and gives us each a ticket with a number



on it. This is all that is required in going across the border. On our return the same officer, who now recognizes the party, takes our tickets and opens the gate.

The quaint old town of Fort Frances was founded as a trading post by the Hud-

son's Bay Company, more than two centuries ago. As early as 1688 this place is mentioned in history. Fort Frances and International Falls have many interests in common. In spite of being in different countries, they are truly twin cities. The huge paper mills on both banks of the Rainy River derive their power from the same dam, and both cities have modern sawmills. Citizens of both sides of the river visit back and forth daily.

Now that we have visited our foreign neighbor we are ready to go home. It is truly marvelous that for over a hundred years two powerful nations have lived side

by side with these many miles of unfortified and unguarded boundary. No wonder that crowned heads who visit here are much impressed by this fact; we ourselves after seeing this small part of our great international boundary, feel that this relationship with our neighboring nation is an ideal one.

We feel now that we have seen a great deal of Minnesota, and each part has its charm; the southern prairies with their rich farms, the Red River Valley in the west with its varied crops, the upper Mississippi with its quarries and its highly developed towns, the eastern border with its great waterpower and its permanent timber industries, and then the north with its iron mines and the lure of the wilderness.

The names which have been given to Minnesota now have a new meaning. "The Bread Basket of the World" brings to mind the wheat farms and the many flour mills, which we have seen. Dozens of creameries rise before our eyes at the mention of "The Bread and Butter State" or "The Cream Pitcher of the Nation." "The State of Good Roads," we know from experience to be a well deserved title, but we have a new name to add to the list. It is "The State of Good Schools."

Everywhere—north, east, south, and west—we have seen fine schools. These more than anything else prove the progress of our state. Here lies her future, rather than in her vast resources. Strong men of courage and foresight have made Minnesota great, but the rising generation with its educational advantages will carry on

and become their worthy successors. As years go by, and the fame of our state increases, every one of her loyal boys and girls will be thrilled by the thought, "It is 'My Minnesota!'"

Which part of the state is most attractive to you? Tell why.



THE OLD AND THE NEW

"THE STATE OF GOOD SCHOOLS"

A SLOGAN

TO PRESERVE AND TO BE PROUD OF

GREAT EVENTS IN MINNESOTA HISTORY

- 1655—Groseilliers and Radisson, first white explorers, arrive in Minnesota.
- 1679—Duluth claims Minnesota for France.
- 1680—Father Hennepin discovers St. Anthony Falls.
- 1766—Jonathan Carver comes to Minnesota to explore.
- 1804—William Morrison finds the source of Mississippi.
- 1805—Zebulon Pike makes treaty with Indians at Pike Island.
- 1819—Colonel Leavenworth arrives at site of Fort Snelling.
- 1820—Fort Snelling is begun.
- 1823—First steamboat comes to Fort Snelling.
- 1832—Schoolcraft explores and names Lake Itasca.
- 1841—Father Galtier builds St. Paul's Chapel.
- 1849—Minnesota becomes a territory.
- 1851—Treaties of Traverse des Sioux and Mendota.
- 1858—May 11, Minnesota is admitted as a state.
- 1861—Beginning of Civil War. Governor Ramsey offers troops.
- 1862—Sioux Massacre.
First railroad in state.
- 1898—Laying of cornerstone of new State Capitol.

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